URBAN TOURISM AND TRANSPORTATION

THE LESSON FOR ATLANTA

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ABSTRACT

Tourism has exponentially increased over the years due to the drastic improvement in transportation systems leading to ease of travel. Cities, being the centers of economy and development, have greatly benefitted from this advancement in infrastructure resulting in a new form of tourism focused on cities. Cities such as New York City, London, Copenhagen and Chicago have been pioneers in urban tourism. The transportation features of these cities such as extensive bike and pedestrian infrastructure, tourist-oriented transit, great accessibility and connectivity have greatly helped in attracting tourists from all over the world. The World Tourism Cities Federation (WTCF) uses World Tourism City Index to evaluate the ranking of cities in terms of tourism but does not include transportation characteristics as parameters to measure attraction to cities. This paper identifies transportation features that can be included in the Index based on the characteristics of tourist-friendly cities. The modified Index is used to evaluate Atlanta as a urban tourist destination.

1. INTRODUCTION

Ever since life developed on Earth, travel has been an integral part of human life. It started with the search of food and comfortable habitat, and later moved on to conquests and battles. The historic records of travelers helped us learn the development of early civilizations and the interaction between various kingdoms. Travelers have been a great source of knowledge for the world. In recent times, travel is often related with employment, business, recreation or other personal purposes. Travel for business, recreation or other personal purposes is classified as tourism, and a traveler who performs such functions is termed as a visitor (United Nations, 2008). In short, a visitor is a subset of traveler and tourism is a subset of travel. United Nations World Tourism Organization (UNWTO) defines tourism as "it comprises the activities of persons travelling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes" (UNWTO, 2016).

The objectives of the paper are:

- Examine the characteristics of non-business tourism market
- Analyze the significance of urban transportation systems in tourist friendly cities
- Expand the World Tourism City Index to include transportation related factors
- Evaluate tourism and transportation in Atlanta
- Compare Atlanta and tourist friendly cities of the World
- Recommend strategies to facilitate urban tourism in Atlanta

The paper details the transportation infrastructure in cities by looking at the examples of London, New York City, Copenhagen, Chicago, and Atlanta. Further, it highlights the key transportation elements in a city that help in the growth of urban tourism. Chapter 2 details the characteristics of urban tourism and Chapter 3 elucidates the role of urban transportation systems in urban tourism. Chapter 4 describes the transportation infrastructure in the four cities, followed by an analysis of the transportation infrastructure in Atlanta and how it compares with other cities in Chapter 5. Important recommendations to enhance the transportation infrastructure in Atlanta ate provided in Chapter 6. The data and characteristics referred in the paper largely refer to non-business tourism. Additional factors have to be considered for business tourism.

2. URBAN TOURISM

Edwards et al. (2008) defines urban tourism as 'one among many social and economic forces in the urban environment. It encompasses an industry that manages and markets a variety of products and experiences to people who have a wide range of motivations, preferences and cultural perspectives that are involved in a dialectic engagement with the host community'. "City is the most sophisticated cultural product for civilized existence" (UNWTO, 2012). The growth of the city should be based on the needs of its residents to increase their quality of life, well-being, environmental quality and cultural identity. The need to analyze a city more deeply arises from the fact that the society, infrastructure and institutions must be organized in the most effective and economic way. A bottom-up approach is required to maximize the utility of a city. Cities serve as nodes for the increasingly globalized world. Therefore, tourism plays a major role in the shaping of a city as it directly impacts the society, infrastructure and institutions of a city.

There is a perfect correlation between urbanization and prosperity (UNWTO, 2012), as cities serve as centers of consumption, pleasure and leisure. Historically, Mesopotamia and Sumeria served as "tourist centers" as people were drawn to its rapid urbanization. These areas served as hotspots for arts, music, literature, architecture and urban design (Karski, 1990). The multi-functional nature of urban tourism has made it complicated and difficult to manage the cities. In the early 20th century, rapid industrialization led to development of cities all over the US that led to increased awareness of cities as tourist places. In particular, the research in urban tourism became an area of interest for scholars all over the world in the 1980's. The increase in attention towards urban tourism research reflects the growth of tourism and importance of tourism to the economy of a city and a country. According to Karski, "…it is usually the totality and quality of overall tourism and town center product that is important…" (Pearce D. G., 2001).

Over the past decades, many new destinations have emerged apart from the traditional destinations of North America and Europe. According to UNWTO, international tourist arrivals are expected to rise 3.3% each year between 2011 and 2030, reaching a total of 1.8 billion arrivals by 2030. Inbound tourism has become one of the world's major trade categories. The overall income generated by inbound tourism is $1.2 trillion in 2011. Globally, as an export category, tourism ranks fourth behind fuels, chemicals, and food. It is one of the main sources of foreign exchange income, employment and a base for indirect employment. The contribution of tourism to world's GDP is close to 5% and estimated to employ 6%-7% of the workforce worldwide (direct and indirect).

There are various reasons for tourists to visit cities that include sightseeing, participation in cultural and sporting events, participation in religious ceremonies, entertainment, shopping, etc. (C.M. & Page, 2006). The most important area for urban tourism in a city is the downtown district covering the historic neighborhood (Lapko, 2014). These areas consist of architectural monuments, cultural facilities, and the main functions of the city including administrative and commercial facilities, and an extensive catering, transport, and accommodation services (Lapko, 2014). Urban tourism helps in the development of the city as well as affects the city in certain ways. Urban tourism can be a platform through which the local economy is revitalized and the quality of life of residents is improved. However, it is often in conflict with other functions of the city such as residential and medical. Urban tourism can build as well as destroy a city, if it is not properly planned. Glasson et. al (1995) mentions that 'tourism contains the seed of its own destruction; tourism can kill tourism, destroying the very environmental attractions which visitors come to a location to experience'.

2.1. BRIEF HISTORY OF URBAN TOURISM

In early times, people moved from one place to another in search of food and to escape danger. Then people started agglomerating at places with abundance of food and feasibility of trade, leading to formation of cities. Cities mainly started developing along waterways as they encourage the movement through water. Once kingdoms and empires were established, people travelled to other kingdoms to gather information and establish trade systems. Towns and cities have always been visited by people living outside their areas for the purpose of trade. Cities being the economic centers have always attracted huge numbers of people throughout the history.

In the past, only wealthy people could travel far the purpose of tourism (Law, Urban Tourism Visitor Economy and the Growth of Large Cities, 2002). People used to travel for leisure to their nearby towns and rarely to their capital cities which were often the centers of economic activity. "Before the twentieth century there were many small states in Europe, each with their own capital, as well as larger cities such as Paris and Vienna" (Law, Urban Tourism Visitor Economy and the Growth of Large Cities, 2002). Capital cities were also the 'seat of royalty' (Law, Urban Tourism Visitor Economy and the Growth of Large Cities, 2002) were larger and provided more amenities for the common people. Tourism is strongly embedded in the history of Western cultural experience, particularly with the elites of ancient Greece and Rome (Towner, 1995). In Egypt, under the pharaohs, there is sufficient evidence of people travelling for pleasure. Their writing describes their visits to pyramid of Sakkara, pyramids of Giza and the Sphinx (Gyr, 2010). The Greeks travelled to participate in various musical and sporting events.

Tourism re-emerged during the Renaissance and the development of spas and grand tours in 17th and 18th centuries helped increase the potential of tourism (Towner, 1995). The construction of railway network in the mid-nineteenth century in many parts of America and Europe provided greater accessibility for people and stimulated travel for leisure purpose. The first sections of track were opened in England, France, Germany, Italy and Switzerland between 1825 and 1845. Railways reduced the cost of travel significantly (Gyr, 2010). Exhibitions and trade fairs invited people to large cities to display their crafts and promote their products (Law, Urban Tourism Visitor Economy and the Growth of Large Cities, 2002). Until the mid-twentieth century, most of the foreign travel was restricted to business tourism. Most of the people were travelling for purchase of materials and sale of goods and establishing trade routes. Travel was expensive and only few people were able to afford it.

From the mid-twentieth century, tourism grew enormously with the advent of jet airplanes and charter flights, which helped tourism grow beyond Europe (Towner, 1995). With the growth of private car, since the 1950's, movement from one city to another became easier. As the transportation infrastructure was being rapidly developed, people moved with ease. By the 1990's, air travel became more affordable and large numbers of people were travelling to foreign destination for leisure. This helped tourism move socially from the elites to middle-income and working classes. Improvements in technology, especially transportation, helped break a lot of barriers in the society. Access to information on tourism became easier with the improvement in technology. Newspapers and magazines provided travel supplements and tour companies offered wider variety of destinations, as more number of airports and hotels became available (Law, Urban Tourism Visitor Economy and the Growth of Large Cities, 2002).

It is interesting to note that most of the literature relating to history of tourism is limited to Western nations and very little research has been done on the history of leisure in countries such as China, India, and other Asian and African nations. One of the possible reasons for negligence can be attributed to the lack of access to historical records and observations of leisure in these countries. Linguistic barriers have prevented researchers from accessing the tourism records of many countries. Also, since most of the tourism research is limited to American or European researchers, they have not been influenced to go beyond their region of focus (Towner, 1995).

People travel for leisure and they are attracted to locations that provide them a range of activities. Sports, especially the Olympic Games, played a crucial role in the development of tourism. Hosting the games became profitable for a city as it enabled them to improve their infrastructure and attract a large number of visitors helping their economy to grow. For example, for the Barcelona Games in 1992, "a ring road was built, a new airport constructed and a waterfront area was cleared and redeveloped as Olympics village" (Law, Urban Tourism Visitor Economy and the Growth of Large Cities, 2002). Large-scale development for sporting events ensured higher number of tourists and assisted in the economic development for the hosts. Sports and tourism are the most preferred leisure experiences in the developed world (Hritz, 2010). In a study conducted in Indianapolis, the residents of the city believed that the concept of sport tourism helped in increasing the cultural identity of the city and better social interaction opportunities (Hritz, 2010). Many cities have used sport-based urban regeneration strategies to enhance the image of the city as a tourist destination. Cities such as Manchester, Birmingham and Sheffield in the United Kingdom have used sport as a tool to build a positive image of the city and have become the significant leisure-tourist destinations in the country (Smith A. , 2012).

2.2. CHARACTERISTICS OF URBAN TOURISM

"Tourism encompasses an industry that manages and markets a wide range of motivations, preferences and cultural perspectives and are involves in a dialectic engagement with the host community. The outcome of this engagement is a set of consequences for the tourist, host and community" (Ashworth & Page, 2011).The above statement summarizes the importance of tourism for all the stakeholders. People have varied preferences and cities offer numerous products. The preferences and products are often asymmetric and the need to study people and cities plays a greater role. Some of the themes involved in urban tourism that provide a greater understanding of the interaction are urban regeneration, transport and infrastructure, management and planning, marketing, visitor perception and satisfaction, sustainability and impacts (Ashworth & Page, 2011). The following sections detail each of the themes.

2.2.1. URBAN REGENERATION

De-industrialization of cities in developed countries has led to a search for alternative methods for urban regeneration. The de-industrialization of cites and growth of tourism has taken place simultaneously and hence, tourism can play an important role in revitalizing the cities. "Tourism-related regeneration strategies have been used to reverse the decline of many de-industrializing North American and European cities" (Cafryn & Lutz, 1999). Tourism being a labor-intensive industry can provide jobs to many people at a time when many manufacturing industries are becoming completely automated (Swarbrooke, 2000). Tourism can help in physical, economic and social regeneration of a city. The local community benefits the most from tourism as it involves "development of facilities, activities, the physical environment and infrastructure" (Law, 1992). This may also influence potential residents to move into the city as it is "believed to be a good place to live" (Craggs, 1998). This may potentially make the city more diverse and receptive to people of different cultures. The growth of urban tourism in cities that have been badly affected by 'urban decline' will enhance pride in the residents of the community (Swarbrooke, 2000). Figure 2.1 illustrates the urban regeneration phenomenon.

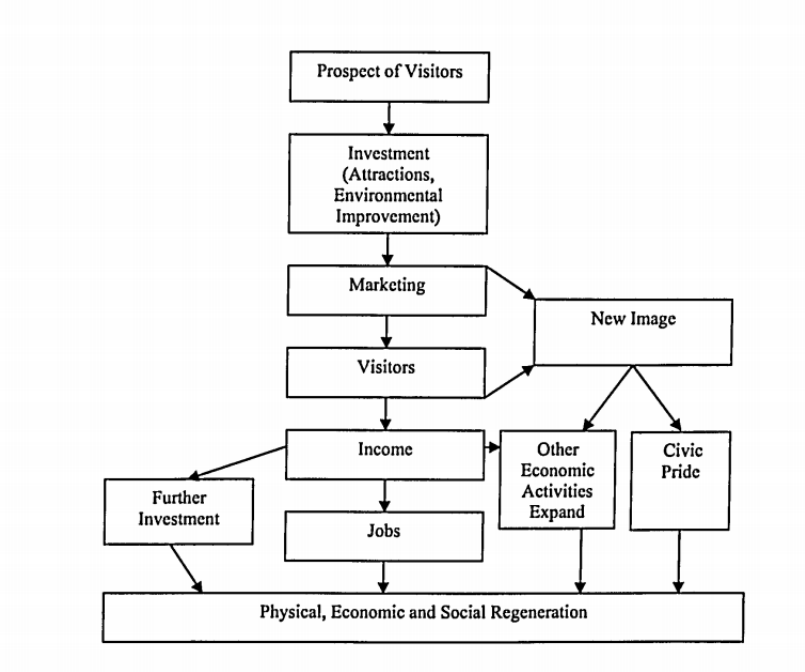


Figure 2-1 Role of Urban Tourism in Urban Regenration (Craggs, 2008)

A study was conducted in Istanbul, Turkey to study the impact of tourism as an urban regeneration tool (Uysal, 2015). The study analyzed urban regeneration practices through tourism in residential and non-residential areas. In non-residential areas, urban regeneration projects transforming industrial buildings to cultural facilities were undertaken. Such activities were done for the benefit of the tourists and boost the economy through tourism. During the process of urban regeneration, many historical churches and mosques were restored in the historical city center. However, transformation of residential areas into tourist zones received a lot of criticism as local cultural characteristics were ignored. For instance, the Sulukule Urban Regeneration Project for revitalizing Sulukule World Heritage Site was criticized for its intention to make the area 'clean, vibrant and safe' by undertaking large-scale demolition and eviction processes. Though the tourism has the potential to revitalize historic cities, proper planning has to be done to avoid negative consequences (Gyr, 2010). Figure 2.2 and Figure 2.3 show the transformation of Sulukule.

Figure 2-2 Sulukule, Turkey (Before demolition) (Gyr, 2010)

Figure 2-3 Sulukule, Turkey (After Construction) (Gyr, 2010)

Another prominent example is the Meatpacking District in New York City. The area was home to 250 slaughter houses in the early 20th century but only 35 remained in 2003 (Meatpacking District, 2015). In the late 1990's, many neglected slaughterhouses were transformed into boutiques and the area is often termed as "New York's most fashionable neighborhood" (New York City, 2013). The area is visited by tourists all over the world and is home to most of the high-end luxury brands. Figure 2.4 shows the transformation of neighborhood between 1985 and 2013.

Figure 2-4 Transformation of Meatpacking Neighborhood (1985 and 2013) (Jacobs, 2014)

2.2.2. INFRASTRUCTURE AND TRANSPORTATION

Tourism is a "complex consumptive experience", as tourists use multiple services during the course of their visit (Gunn, 1988). Various economic, political and infrastructural features play a significant role in shaping the tourists experience. In economic terms, this is a demand and supply analysis due to the multiple demands of the tourists and numerous services supplied by the destination (Murphy, Pritchard, & Smith, 2000). Infrastructure plays a key role in enriching the destination experience (Smith L. S., 1994). Availability or lack of infrastructure decides the visitors' trip experience. Panasiuk (2007) broadly divides Infrastructure into technical and social.

Technical infrastructure includes basic devices used in transport, gas, heat, power, communication and road industry, and social infrastructure includes devices connected with education, culture, health, public administration and science (Panasiuk, 2007). Public utilities and infrastructural support are crucial in a successful tourist destination (Seetanah, 2011). The structure of tourist infrastructure consists of four elements: typically tourist infrastructure, paratourist infrastructure, gastronomy and accompanying facilities (Panasiuk, 2007). 'Typically tourist infrastructure' includes trails, accommodation facilities, tourist information, arrivals servicing. Transportation, trade, and service facilities are referred to as paratourist infrastructure. Availability and accessibility of quality food is an important element in tourist infrastructure and accompanying facilities such as leisure, culture, and entertainment benefit the tourists (Panasiuk, 2007). For a tourist to achieve maximum pleasure, a combination of all the four elements is required. A study conducted by the World Travel and Tourism Council showed that France, USA and Canada have the best tourism infrastructure among the 22 countries surveyed (Refer Figure 2.5).

Table 2.2: WEF infrastructure ratings by selected country by type (2013)

	Composite rank	Composite score (0-7)	Tourism infrastructure rank	Air transport infrastructure rank	Ground transport infrastructure rank
France	1	5.9	2	5	2
United States	2	5.8	1	2	6
Canada	3	5.7	4	1	7
United Arab Emirates	4	5.6	5	3	5
Singapore	5	5.5	8	6	1
Australia	6	5.3	3	4	9
Barbados	7	5.3	6	10	4
Japan	8	5.1	12	8	3
Thailand	9	4.5	7	7	13
Turkey	10	4.4	10	9	11
Russian Federation	11	4.1	9	11	17
South Africa	12	4.1	13	14	14
Chile	13	4.0	11	17	12
Mexico	14	3.9	16	15	15
India	15	3.8	20	13	8
China	16	3.6	21	12	10
Brazil	17	3.6	15	15	21
Argentina	18	3.4	14	19	19
Peru	19	3.3	17	21	19
Egypt	20	3.1	18	18	18
Kenya	21	2.8	22	22	16
Colombia	22	2.8	19	20	22

Sources: World Economic Forum, WTTC, Oxford Economics
Note: Countries from the Americas are shaded in blue
Ranks and ratings are shaded using a colour scale, where green signifies strong performance and red signifies weak performance

Figure 2-5 Tourism Infrastructure Ranking (World Travel and Tourism Council, 2014)

Roads, harbors, electricity, sewage, water, and airports are essential for tourism planning and development (Seetanah, 2011). Without the availability of basic services, investors will not be willing to invest in tourist facilities. Both private sector and the public sector play a crucial role in the development of the infrastructure. However, providing infrastructure is a complicated process as there is a lack of coordination among the various players (TTF Australia, 2008). Most often the policies that initiate development of infrastructure are not under the tourism ministry (Refer Figure 2.6), resulting in delay in decision-making.

GOVERNMENT PORTFOLIOS AND TOURISM INFRASTRUCTURE	
TYPICAL FEDERAL / STATE PORTFOLIOS **Plan, build, manage or regulate infrastructure**	**TOURISM INFRASTRUCTURE** **Fundamental infrastructure for tourism access and product**
Aviation	Airports and aviation capacity
Education	Tertiary education facilities
Environment	National parks and visitor facilities
Gaming and Racing	Casinos, racetracks and gaming facilities
Heritage and Arts	Museums, art galleries and cultural facilities
Indigenous Affairs	Indigenous tourism facilities
Planning, Lands and Local Government	Accommodation and precinct development
Regional Development	Infrastructure in regional tourism destinations
Sport and Recreation	Stadia, sporting venues and recreation facilities
State Development	Convention, exhibition and entertainment venues
Tourism	Minor infrastructure for product development
Transport and Infrastructure	Roads, passenger rail and cruise shipping ports

Figure 2-6 Government Portfolios and Tourism Infrastructure in Australia (TTF Australia, 2008)

Transportation is an essential component in the tourism industry for creation of new attractions and growth of existing ones (Kaul, 1985). Section 3 details the relation between transportation and tourism. Most of the international tourists originate from developed countries and they are accustomed to excellent infrastructure conditions. They prefer similar infrastructure when they travel to other countries and inefficient infrastructure systems in the developing world restrict these tourists to travel to those places (Seetanah, 2011). A study conducted to estimate Turkey as a tourism destination revealed that infrastructure is a key determinant of tourist arrivals (Gearing, Swart, & Var, 1974). Sports stadiums, entertainment venues, parks, zoos, museums, galleries, aquariums, etc. are some of the common types of urban infrastructure that supports tourism. The role of service infrastructure is essential in enriching the product experience. The development of infrastructure in a destination creates a favorable impact on other fields of economy. Residents of the city can benefit from the infrastructure and gain financially from the increased tourist arrivals.

2.2.3. MANAGEMENT – PLANNING AND MARKETING

For achieving a successful tourism management mechanism, planning tourism at all levels is essential. The experience in organizing tourism all over the world has showed that common problems can be avoided and maximum tourist utility can be achieved. The places that have not undertaken planning at all levels have more often than not been the victims of tourism associated problems. The problems not only affect the tourists but also have a significant detrimental effect on residents. Unplanned tourist destinations cannot match the planned tourism areas in terms of patronage. Poorly planned areas can be redeveloped but requires a lot of time, effort and money.

Tourism often interacts with different sectors of society and economy. Being a relatively new organized sector, many governments and private agencies are unaware of the complexities of tourism management and contribute to an unsuccessful industry. Places that attract tourists need an effective management policy to retain and gain tourists. Places that do not have a flourishing tourism industry can start developing tourism through established planning mechanisms. Planning tourism happens at multiple levels: national, regional and local. At national and regional levels, planning is concerned with tourism development policies, structure plans, facility standards, institutional factors and all other elements necessary to develop and manage tourism. At local levels, community plays a greater role and a potential for "synergistic partnerships" between the community and tourists exists (Murphy P. E., 1988).

A number of trained supporting staff is required to look after different aspects of tourism. The staff includes travel agents or tour operators, tour guides, chefs, stewards, etc. Continuous supply of these services is required due to growth of tourism industry. Skilled labor is essential to bring an effective interaction with the tourists. Tour guides working at the destinations determine the level of satisfaction a tourist achieves from the place. A poor guide can create a very bad impression of himself, his colleagues and the destination. Local governments should fund the training of tour guides and tour operators so as to ensure the development of skills of the tour guides (GTI, 2015).

Tourism industry employs one of the most interesting forms of relational marketing (Garrod & Fyall, 2005). The 'relational' view of marketing focuses on being market-driven and customer led and forms the base for collaborative marketing (Garrod & Fyall, 2005). The marketing of a place is defined as "involves regarding places as a collection of products, with their planning and marketing being guided by a strategic vision and related goals, and also by satisfying the needs and demands of identified target users, who are selected according to the strategic goals" (Bramwell, 1998). The products of these places should as closely related to the demands of the customers. For instance, a survey was conducted to analyze the motivations of American and Canadian travelers to Ontario. The study revealed that shopping and dining are the highest motivations for the tourist's visit to Ontario (Malone Given Parsons Ltd, 2009). Figure 2.7 represents the results from the study.

	Canadians	Americans
1.	**Shopping**	**Shopping**
2.	**Dining**	**Dining**
3.	**Sunbathing/sitting on a beach**	**Casinos**
4.	**Strolling around a city observing its buildings and architecture**	**Amusement Parks**
5.	**Swimming**	**Swimming**
6.	**Visiting national, provincial, state parks**	**Strolling around a city observing its buildings and architecture**
7.	**Visiting historic sites, monuments, and buildings**	**Visiting historic sites, monuments, and buildings**
8.	**Movies /Cinema**	**Sunbathing/sitting on a beach**
9.	**Casinos**	**Movies /Cinema**
10.	**Hiking**	**Visiting national, provincial, state parks**

Figure 2-7 Results of Motivation Survey in Ontario (Malone Given Parsons Ltd, 2009)

It is also interesting to note that the ranking of motivations varied widely between the tourists. Therefore, tourists derive different levels of satisfaction from each product and have varied expectations from each product. Places have to develop "multi-functional products" based on a vision and understand the benefits sought by different users (Bramwell, 1998). Since private and public sectors are involved in development of tourism in a city, the coordination required in developing effective products has always been a problem. Bianchini (1990) mentions that a civic 'cultural democracy' approach can be used to engage wide participation in cultural activities to create a sense of community and better the image of a place. Product images play a key role in building the perception of a tourist. Image building is essential for the success of a tourist destination (Bramwell, 1998).

Another context of looking at tourism is in the service context. A service is defined as 'any activity that one party can offer to another which is essentially intangible and does not result in the ownership of anything. Its production may or may not be tied to a physical product' (Garrod & Fyall, 2005). Tourism shares many characteristics with the services sector, as tourism products are often perishable in nature (hotel rooms, airline seats, cruise cabins, etc.) (Garrod & Fyall, 2005). Hence, effective tourism planning is required to manage the demand and supply. Being a multi-sectorial industry no single industry has control over the entire tourism product. Successful delivery of a product requires complex interactions between the stakeholders and building successful relationships. Image building is critical for successful relationships to emerge and enable tourism organization provide a seamless experience. Often, marketing of tourist products is guided by short-term strategies. This could be attributed to the volatility of tourism markets and short-run profitability and cash flow is crucial for the sustenance of business. Even

the tourist displays no sense of ownership because the person rents most of the products during the vacation. Also, the seasonal nature of tourism emphasizes short-term marketing strategy than long-term strategy (Garrod & Fyall, 2005).

2.2.4. TOURIST PERCEPTION AND SATISFACTION

People travel to attain satisfaction and the amount of satisfaction determines the perception of a tourist towards a destination. It is important for the tourism industry to analyze the consumer behavior in order to provide better facilities for the visitors. Satisfied tourists often share their positive experience to others and repeat their visit (Armario, 2008). Tourists' decisions and behavior patterns depend on a wide range of relationships between variables. The variables are derived from the "characteristics that influence the decision before the journey, tourist's experience at the destination, and tourist's experience and future intended behavior" (Armario, 2008). A research at Cape Cod, Massachusetts (USA) of 685 vacationing tourists identified eight factors of tourist satisfaction in a tourist destination area. The factors were beach opportunities, cost, hospitality, eating and drinking facilities, accommodation facilities, environment, and extent of commercialization (Pizam, Neumann, & Reichel, 1978). Choosing a destination is a rational decision process where the tourist is looking for a product that may initially offer the greatest satisfaction (Armario, 2008). A 'push' and 'pull' process happens wherein the tourist is pushed by internal and emotional process, and pulled by the availability of activities and characteristics of the destination (Armario, 2008). It is not clear whether external sources of motivation have greater effect than internal factors or the vice-versa. Rajesh (2013) developed a relationship indicating the impact of tourist perception, destination image, and tourist satisfaction on destination loyalty. Figure 2.8 illustrates the relationship.

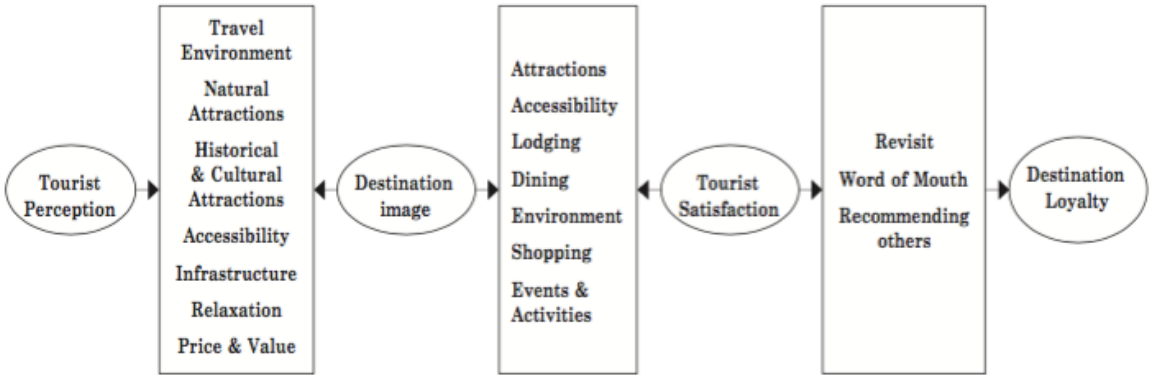


Figure 2-8 Impacts of Tourist Perception, Destination Image and Tourist Satisfaction on Destination Loyalty (Rajesh, 2013)

From the figure 2.8, we can see that there is a strong relation between tourists' perception of a city with the loyalty to the destination. A number of factors play a role in determining the destination loyalty. Newman and Werbel (1973) defined "loyal customers as those who re-buy a brand, consider only that brand, and do no brand-related information seeking". The strong affinity shown towards a destination should be irrefutable to be referred to as 'loyal' to the destination. For a tourist to be loyal, he/she must derive immense satisfaction from the destination. Satisfaction surveys are one of the efficient and effective tools to gather the

information from tourists on their opinion of the destination (Garau & Alegre, 2010). The most widely used methodology to study the satisfaction of tourist is to first identify the most important attributes that define the type of destinations attractions and followed by asking the tourists to rate them (Garau & Alegre, 2010). Another approach to measure satisfaction is by equity theory where it is analyzed as a relationship between sacrifices and rewards a tourist expects in terms of cost, time or effort and value received (Oliver & Swan, 1989). Giese and Cote (2000) used the basis of context to specify the satisfaction levels. The three basic elements identified by them were response to emotional judgment, aspect of service, and aspect of time. It is important to study expectation of a visitor to estimate the satisfaction. The tourist judges the experience of his vacation by comparing the obtained result with what was expected. Expectation is defined as the "perceived likelihood that a given act will be followed by a particular outcome" (Ivancevich & Matteson, 1993)

2.2.5. SUSTAINABILITY

The demand for environmentally sensitive practices in tourism grew rapidly in the 80s and various organizations especially in the Western world played an important role in formulating the theory of sustainable tourism. According to UNWTO, sustainable tourism can be defined as "tourism that takes full account of its current and future economic, social, and environmental impacts, addressing the needs of visitors, the industry, and the environment and host communities" (UNWTO, 2015). From the definition, we can understand that for the purpose of tourism we should make optimal use of environmental resources so as to maintain ecological process and conserve the nature, respect the socio-cultural values of the host community, and ensure viable and long-term economic operations providing economic benefits to all stakeholders (UNWTO, 2015). Another definition of sustainable tourism is 'tourism which is in a form which can maintain its viability in an area for an indefinite period of time' (Butler, 1993). According to this definition, emphasis is given to maintenance of a destination as a tourist hotspot such that it never loses its aura. London, Paris, and Rome fit this category as they have forever been tourist destinations but the limited availability of resources is not considered in the aspect of sustainable tourism. White et al. (2006) details the principles of sustainable tourism (shown in Figure 2.9).

It is very likely that tourism will be the largest contributor to world trade in this century. From local to global scales, tourism has the capability to play a major role in sustainable development (Hunter, 1997). The question is on how to manage the natural, built and sociocultural resources of host communities so as to ensure their economic well-being, preserving their socio-cultural and natural capital, achieving intra- and intergenerational equity securing their self-sufficiency, distribution of costs and benefits, and satisfying needs of tourists (Briassoulis, 2002). The resources at a destination are used both by the tourists and the residents. Once these resources are over-exploited, applying sustainable development becomes really difficult. Usually, it is socially or morally unacceptable to exclude one or more groups to use the common resources (Briassoulis, 2002). There are two possible approaches to put concept of sustainable tourism into practice, one is the macro approach that relies on maintenance of environmental balance sheets and the other is micro approach that uses social investment appraisal (Garrod & Fyall, 1998). Both these methods monetize natural capital that has often been criticized (Garrod & Fyall, 1998).

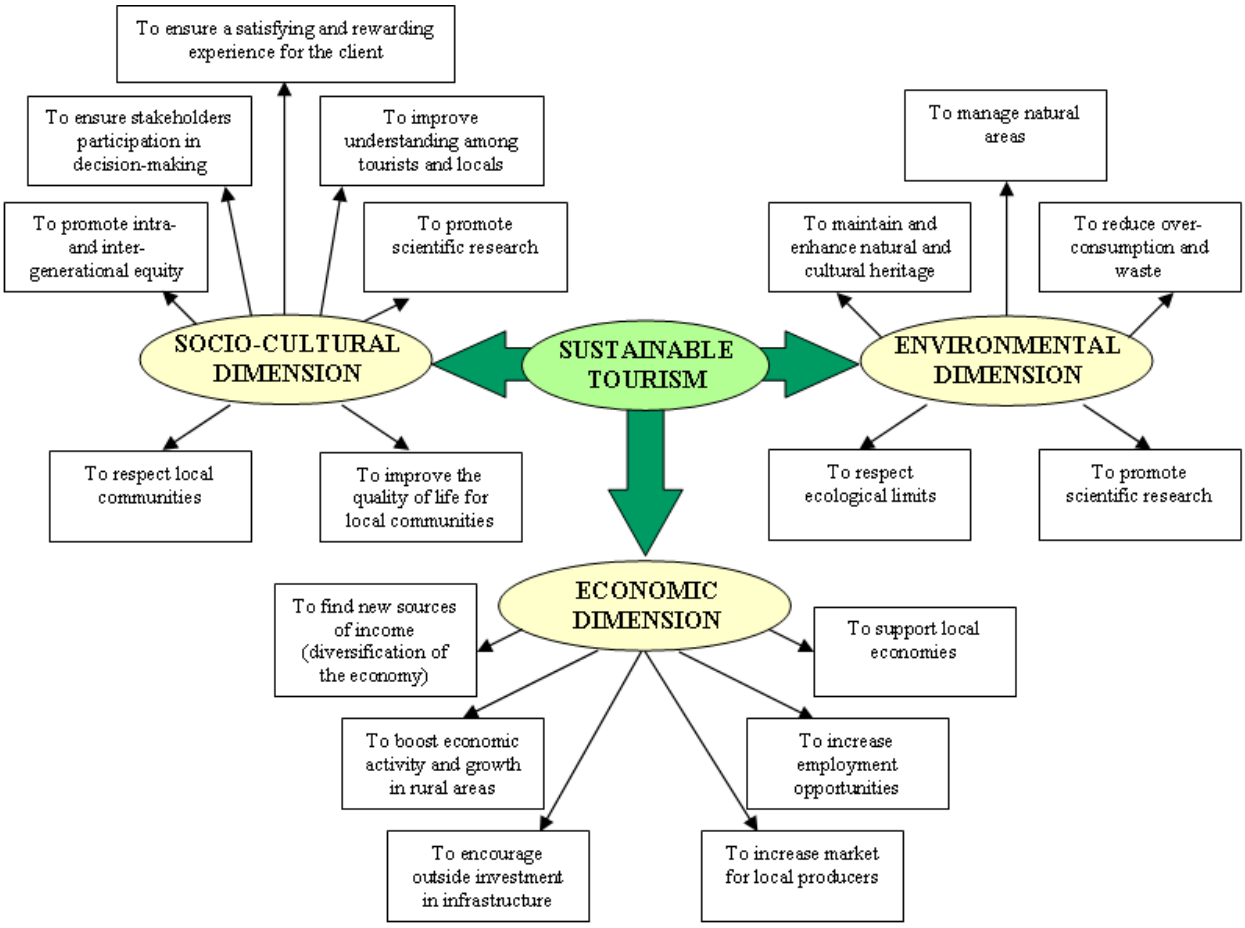


Figure 2-9 Principles of Sustainable Tourism (White, McCrum, Blackstock, & Scott, 2006)

The concept of carrying capacity plays an important role in sustainable tourism (Saarinen, 2006) Carrying capacity if defined as the maximum number of people a site can carry without affecting the physical and natural environment and without any decline in quality of experience gained by tourists (Saarinen, 2006). The search for maximum acceptable number of tourists has failed because it is a question of human values, and perceptions concerning the resources (Hughes & Furley, 1996). Three aspects of idea of sustainability identified by Saarinen (2006) are resource-based tradition, activity-based tradition, and community-based tradition. These aspects emphasize that sustainability should be connected with needs of people and not any industry such that the natural and cultural resources can be protected and safeguard the human needs of the future (Saarinen, 2006).

2.2.6. IMPACTS

Impacts of tourism cannot be evaded but planning and managing the industry effectively can reduce the negative impacts and give prominence to positive impacts. Well-managed tourism can play a "positive role the socio, cultural, economic, environmental and political development of the destination" (UNEP, 2015). Two groups incur the costs and benefits of tourism, namely, visitors and residents (Theobald, 2005). Visitors receive benefits from the satisfaction of visiting

the place but also incur costs due to travel. The resident population mainly benefits financially from tourism but also incur costs of various types. These costs are due to the impacts caused by tourism. The impacts are broadly classified as environmental, socio-cultural and economic (UNEP, 2015). Political effects also have a significant impact on tourism. When analyzing the impacts of tourism, the carrying capacity of a destination must be analyzed (Theobald, 2005). Carrying capacity is the point beyond which the further "visitation" (Theobald, 2005) would lead to the deterioration of the city. To measure the range of impacts of tourism, various variables have to be incorporated into the estimation. These variables must consider the economic, socio-cultural and environmental impacts. The difficulty of quantifying the environmental and socio-cultural variables has made the estimation of effects difficult (Theobald, 2005). Let us look at each category of impacts in detail.

2.2.6.1. ECONOMIC IMPACTS

Tourism contributes significantly to the economy of a nation by providing opportunities for job creation and revenue generation (Zaei & Zaei, 2013). According to the World Tourism Organization, 698 million people travelled to a foreign country in 2000 spending US$478 billion (UNEP, 2015). International tourism creates a flow of foreign currency into the economy of the destination country and acts as a major export industry to a number of nations. The revenue generated from tourism is further moved around the domestic economy creating multiple rounds of domestic economy (Theobald, 2005). These secondary effects may exceed the initial direct effect. In less developed countries, tourism can play a significant role in boosting the local economy, as alternative approaches for development are limited (Theobald, 2005). Tourism requires development of infrastructure that can be utilized both by the visitors and residents (Zaei & Zaei, 2013). Effective planning of infrastructure development is required to avoid "congestion, over-crowding, and damage to environment" (Zaei & Zaei, 2013). Tourism can help in the reduction of poverty by providing alternative sources of income for the residents. It facilitates literacy and education of the local population as the people are exposed to diverse languages and cultures. It improves the standard of living of the community and cumulatively improves the per-capita income of the nation. Government earns significantly from taxes and this income can be used to develop infrastructure for tourism.

However, it is important to note that every destination has a carrying capacity. Hence, there are a few negative economic impacts of tourism. First, local businesses lose significantly from the 'all-inclusive' tour packages promoted by the tour agencies. As all the expenses are managed by the tour agency, there is limited opportunity for local businesses to earn from tourists. Second, leakage of direct income is a major issue especially in developing countries. The amount of tourist money that remains locally after taxes, profits, and wages are paid outside the area is often negligible. The leakage is 80% in the Caribbean and 40% in India (UNEP, 2015). Third, the initial cost of developing infrastructure can be very high and public resources spent on infrastructure development may reduce the investment in other critical areas such as health and education (UNEP, 2015). Four, the local community may be extremely dependent on tourism which can lead to less diversification in economy. For instance, 30% of workforce in Gambia depends directly or indirectly in tourism and this extreme reliance may increase their susceptibility to risks. Five, the seasonal character of tourism can affect the jobs especially if there are alternatives to income generation during the off-season. Six, economic crisis in

developed and developing economies can deeply impact tourism and the limited caution in foreseeing such events increases the risks of a tourism dependent economy (UNEP, 2015).

2.2.6.2. SOCIO-CULTURAL EFFECTS

There are wide cultural and behavioral differences between the residents and visitors to a city. Sometimes, this cultural difference could be the stimulant for tourism (Theobald, 2005). However, the differences in physical appearance, language and cultural behavior can be so great that it could lead to antipathy (Theobald, 2005). The problem is worsened when tourists are unaware of the local customs and tradition, which happens more often than not. Tourists may also be vulnerable to robbery and crimes. The problem is achieving a consensus between the diverse thoughts. Other negative socio-cultural effects of tourism are commodification, standardization, loss of authenticity, child labor, and prostitution and sex tourism (UNEP, 2015). Commodification refers to turning local cultures into commodities in such a way that ethic rituals and festivals are altered to match tourist expectations. To satisfy the visitors' desire for familiar facilities, cities often tend to lose their identity to provide a standardized experience to the visitor. Loss of authenticity arises when the tourist wants a glimpse of the local atmosphere. To satisfy the needs of the tourist, modifications are made to the city that are not authentic. Many jobs in the tourism sector demand long working hours, unstable employment, low pay and little qualifications. Young children perfectly fit the requirements and are forced to work. Tourism industry contributes significantly to child labor. The growth of tourism has paralleled commercial sexual exploitation of children and young women and tourism provides an easy access to such exploitation (UNEP, 2015).

There are number of positive socio-cultural effects from tourism. The interaction of people from diverse backgrounds can lead to improved lifestyles and practices of the residents and visitors, commonly termed as the 'demonstration effect' (Zaei & Zaei, 2013). Tourism can lead to better local facilities that can improve education and health care for local population. Exhibitions, fairs, carnivals at the destination provide visitor and local residents with entertainment opportunities. Tourism leads to historic preservation and conservation of local cultural heritage (Zaei & Zaei, 2013) and provides an opportunity for rebirth of traditional arts and crafts.

2.2.7.3 ENVIRONMENTAL EFFECTS

The term 'environment' refers to the "physical setting in which the tourism takes place" (Zaei & Zaei, 2013). The environment can be natural or built, and the development of tourism in a locality will depend on the environment. The physical setting can be coastal resorts, mountain ranges, historic cities, picturesque villages, museums and national monuments and any other locale that stimulates travel (Zaei & Zaei, 2013). The extent of "environmental and ecological damage" (Theobald, 2005) is dependent on the patronage and degree of development both spatially and temporally in an area. Poorly planned tourist destinations will have an excessive damage on the environment. At times, irreplaceable damage is caused to the natural environment. For example, marshlands that prevent coastal flooding and assist fishing have been destroyed to create tourist marinas (Theobald, 2005). From the New Forest in Southern England, 25,000 empty bottles are collected each year (Theobald, 2005). These bottles pollute the natural

environment of the forests and may be consumed by the wildlife. Depletion of water resources, land degradation, air and noise pollution, sewage, aesthetic pollution, deforestation, trampling are some negative environmental effects of tourism (EPA, 2015). However, tourism has the potential to create beneficial effects on the environment by promoting conservation and environmental protection (EPA, 2015). Entry fees and other charges collected from tourists to access these areas can be used to conserve the environment (Theobald, 2005).

2.3. TYPOLOGY OF TOURIST CITIES

Many researchers note that urban areas are distinctive and complex spaces (Pearce D. , 1995). The commonly accepted characteristics of cities are "high physical densities of structures, people and functions; social and cultural heterogeneity; economic multi-functionalism; and a physical centrality within regional and interurban networks" (Pearce D. G., 2001). For example, visitors are drawn to big cities such as Boston as they can experience all the characteristics of a city. Therefore, "the demand for urban tourism is thus multidimensional and frequently multipurpose in nature" (Pearce D. G., 2001). People visit cities to experience all its aspects and maximize their utility. Although, cities may vary in detail and character, they share key themes that include demand, supply, development, marketing, planning, organization and operations (Pearce D. G., 2001). The most common approach to the scale of analysis of a city has been to adopt a supply side focus. It is based on the inventories of tourism product, availability of accommodation, tourist attractions and transport. A framework that uses a combination of supply, demand and consumption may provide a better understanding of the quality of the city for its tourists (Pearce D. G., 2001). Incorporating marketing and development into the picture of tourism will provide a base for comprehensive tourism planning. The spatial application of research plays a major role in analysis, as in general; the entire city does not contribute to tourism, and only certain elements contribute to tourism. The most commonly used approach to analyze urban tourism is to consider the city as whole, but often only certain parts of the city attract tourists. Spatially, the analysis of urban tourism can be performed at; city-level, tourist districts (historic districts, ethnic districts, sacred spaces, redevelopment zones, entertainment destinations, functional tourism districts), and tourist sites (Pearce D. G., 2001). Tourism can also be explored at a broader geographical context with issues explored at regional, national, and international level (Pearce D. G., 2001).

A city may have multiple/over-lapping roles: gateway, staging post, destination and a tourist source (Pearce D. G., 2001). "Gateways are seen as major entry/exit points for tourists into or out of a national or regional system" (Pearce D. , 1995). Staging posts are places for temporary stopover before travelling to the destination. Destination is the generally the tourist location to which people travel and a tourist source is a place which supplies a large number of tourists. Such classification of cities helps in a better understanding of the role played by a city.
The conduct of the tourist in an urban destination can be classified into four categories; namely, selectivity, rapidity, infrequency and capriciousness (Ashworth & Page, 2011).
Selectivity: The tourist makes use of only a very small portion of all that the city has to offer.
Rapidity: The tourists consume the elements of a city very rapidly
Repetition: Tourists to urban destinations are less likely than visitors to non-urban destinations to return repeatedly to the same city.
Capriciousness: Urban tourism is especially vulnerable to the shifts in fashion and in consumer tastes and life-styles.

3. TRANSPORTATION IN CITIES

"Transportation plays a crucial role in urban development by providing access for people to education, markets, employment, recreation, healthcare and other key services" (United Nations, 2010). In the developing world, enhanced mobility for the poor and disadvantaged groups is one of the priorities of achieving Millennium Development Goals (United Nations, 2010). The major problem associated with transportation in cities is congestion that significantly impacts productivity. Transportation enables economy to grow but if ill-managed; it could result in an inefficient system. In Asia, the number of vehicles per one thousand people has more than tripled in the past 30 years (United Nations, 2010). The public transport services have often been inadequate and most of them running much over capacity. In the developed world, most of the transportation systems are car-oriented and adding more car-oriented infrastructure often neutralizes congestion. Promotion of alternate modes of transport is given little priority and often neglected by decision makers due to insufficient funds allotted for such modes.

Another major problem associated with urban transportation is air pollution with the developing world suffering the most. For instance, World Health Organization (WHO) estimates that 25.6% of children in Bangalore (India) suffer from asthma between 1999 and 2009 (United Nations, 2010). Such statistics show that cities suffer from the negative effects of transportation and sustainable policies have to be developed to reduce the externalities associated with private cars and air transport. One of the ways to reduce the effects of cars and other gas-guzzling engines is to promote public transport, bicycle and pedestrian infrastructure. It has minimal ecological impact and reduction of energy dependence, improving health and saving money, improvement in quality of life, and better use of urban spaces (European Commission, 2009).

3.1. URBAN TRANSPORTATION SYSTEMS

Cities would have never developed without transportation systems. "They are the bones that support a complex social and economic fabric" (National League of Cities, 2015). The city's ability to generate income and wealth for its residents is improved if transportation system is efficient. Most of the urban transportation systems are owned by the public sector and their role is important in maintaining the efficiency of the system. It is important for a transportation system to be 'efficient' and 'fair' (National League of Cities, 2015). 'Efficiency' refers to a high ratio of benefits for costs and 'fair' means appropriate distribution of benefits of costs. Understanding the system is important for making any system efficient and fair (National League of Cities, 2015).

The transportation system is complex and often travelers have multiple intentions for the choice of mode of transport. The users aim for value and often, map the costs against benefits for a particular mode. These individual choices may not lead to optimum system performance (National League of Cities, 2015). Pricing the transportation system remains a huge issue.

Urban transportation is broadly organized into three categories: collective, individual and freight transportation (Rodrigue, 2013). Collective transportation includes modes such as buses, trains, tramways, ferryboats, etc. where large numbers of people share the system to travel. Such

systems are usually maintained and operated by an agency (either public or private). Individual transportation refers to biking, walking, automobile and motorcycle. The usage of each of the individual modes varies widely between cities (Rodrigue, 2013). Cities being the dominant centers for the economy, freight transportation is critical for the city's production and consumption of goods. Truck movements can be observed between industries, warehouses, ports, rail yards, distribution centers and airports (Rodrigue, 2013). Transportation systems have evolved from the horse car to automobiles. Cities have adapted to the changing transportation systems with evolving urban forms. Urban form refers to the 'spatial imprint of an urban transport system as wells as the adjacent physical infrastructures' (Rodrigue, 2013). The urban spatial structure can be classified into centralization and clustering. Development of freeways and increased use of personal automobiles has led to urban sprawl. The level of mobility often determines the urban land allotted for transportation. The land is commonly allotted for pedestrian areas, roads and parking areas, cycling areas, transit systems, and transport terminals that include airports, rail stations, sea ports, etc. (Rodrigue, 2013).

3.2. RELATION WITH URBAN TOURISM

"The inextricable relationship between transport and tourism is of fundamental importance in explaining the tourism system" (Leiper, 1990). There is a deep relationship between transportation and tourism and they change and develop along with and a result of each other (Mirzaee, 2014). The two main functions of transportation with respect to tourism are means of displacement and transportation system as an attraction (Mirzaee, 2014). Most people travel for the sake of getting from one place to another, however, some travel for the experience of the mode of transportation. For instance, most of the users of cable cars in San Francisco travel to derive pleasure from the mode rather than reach a destination. "The travel and tourism experience of tourists and the ideas about tourism products start and end with transportation" (Mammadov, 2012). Hence, transportation and tourism are inseparable.

The modes of transport play a critical role in enriching the experience of tourism. The two most important modes used for travel in the perspective of tourism are air travel and car. Air travel has grown tremendously over the past years especially since the beginning of mass tourism throughout the world. The personal car has also achieved a tremendous growth over the past decades and the car remains a significant mode of transport for domestic tourism in developed economies (Lumsdon, 2000). For instance, in Britain, it is estimated that car accounts for 74% of all domestic holiday trips (Lumsdon, 2000).

A transport system is essential for connecting the tourist origins to their destination. A good and attractive transportation system is dependent on the availability of transportation infrastructure. A destination should be easily accessible and comfortable to move around (Khadaroo & Seetanah, 2008). Most of the prior research viewed transportation as accessibility in terms of assessing the relation between transport and tourism (Khadaroo & Seetanah, 2008). This paper will focus on how transportation infrastructure in the cities helps to cater the needs of tourists.

4. TOURISM IN MAJOR CITIES

The following section describes the characteristics behind the success of tourism in some of the most tourist friendly cities.

4.1. LONDON

London receives one of the highest numbers of tourists annually. It is comparable with world tourism leaders such as Singapore and Hong Kong and significantly leads in Europe. Figure 4.1 illustrates the top tourist destinations in 2009 and 2010. Sites such as the British Museum in London receives more than 5 million tourists annually and the city has one of the highest hotel occupancy rates (Kyte, 2012). Domestic tourists are significantly smaller as compared to international tourists in terms of spending and days of stay.

Most visited cities, 2010		Thousands of visitors	**Most visited cities, 2009**		Thousands of visitors
1	**Hong Kong**	**19,973**	**1**	**London**	**14,211**
2	**Singapore**	**18,297**	**2**	**Bangkok**	**9,986**
3	**London**	**14,706**	**3**	**Singapore**	**9,683**
4	**Macau**	**13,098**	**4**	**Kuala Lumpur**	**9,400**
5	**Bangkok**	**10,984**	**5**	**Antalya**	**8,868**
8	New York City	8,961	6	New York City	8,479
9	Paris	8,176	8	Paris	7,750

Source: Euromonitor International[9]

Figure 4-1 Tourism patronage across cities in the world (Kyte, 2012)

4.1.1. AS A TOURIST DESTINATION

London had 37.8 million visitors in 2011, which was increase of 4.5% from the previous year. About two-thirds of these visitors were to free attractions. Figure 4.2 shows the top 10 most visited attractions in London as per the London Visitor Survey. Museums, historic buildings, galleries, parks and gardens receive are London's top attractions. London Eye is the most visited paid attraction and British Museum is the most visited free attraction. The survey also revealed in a contrast in preferences between international and domestic visitors. Figure 4.3 shows the preference of domestic and international visitors in terms of tourist destinations in London.

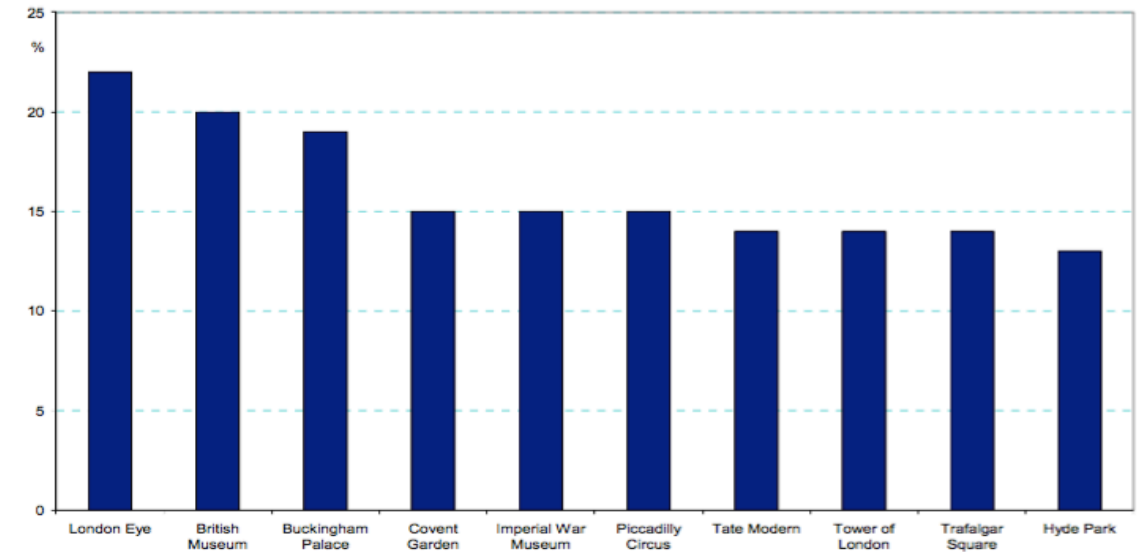


Figure 4-2 Top 10 most visited attractions in London (Kyte, 2012)

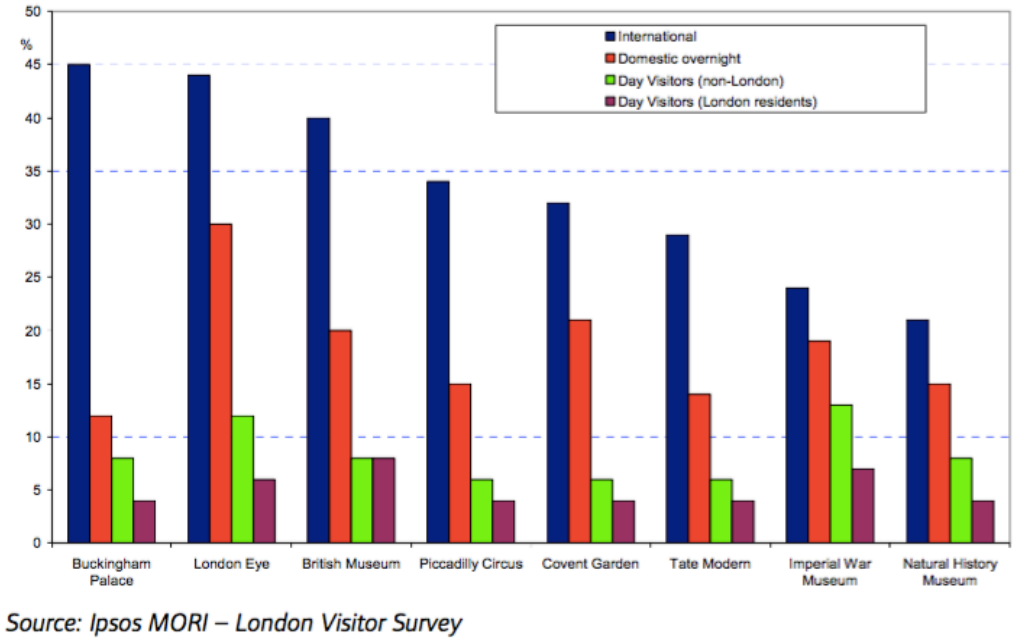
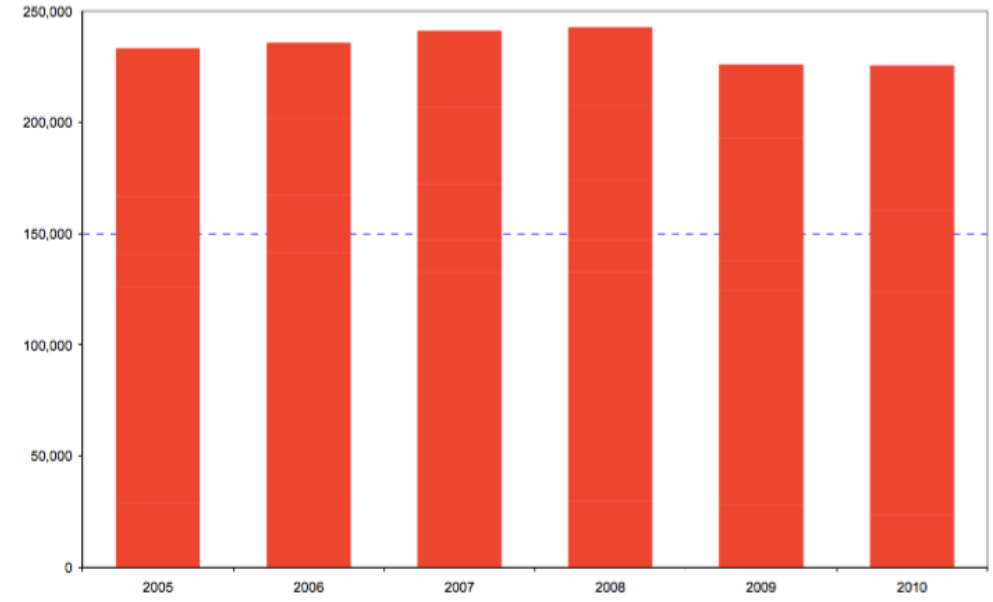


Figure 4-3 Preference of visitors (Kyte, 2012)

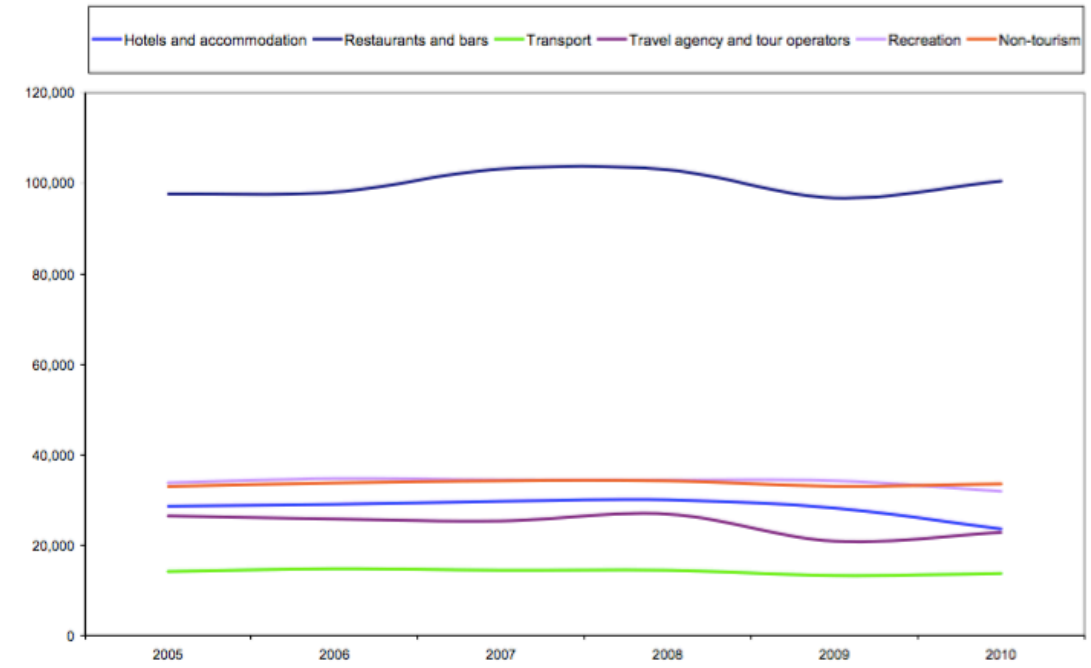
Tourism contributes to 5 percent of jobs in London, which amounts to 226,000 jobs in 2012 (Kyte, 2012). Figure 4.4 shows the number of jobs supported by tourism between 2005 and

2010. Figure 4.5 indicates the industries that support the employment. We can observe that restaurants and bars employ the highest number people directly supported by tourism.



Source: ONS – BRES / APS, GLA Economics, ONS Regional Statistical Support

Figure 4-4 Jobs contributed by tourism (2005-2010) (Kyte, 2012)



Source: ONS – BRES / APS, GLA Economics, ONS Regional Statistical Support

Figure 4-5 Employment by sector (2005-2010) (Kyte, 2012)

4.1.2. TRANSPORTATION IN LONDON

London has numerous transportation options for its visitors. Public transport contributes to 37% of total trips and private transport contributes to 37% of the trips in 2013. Walking and biking contribute 24% and 2% of the total trips respectively in 2013 (Transport for London, 2014). The Table 4.1 shows the trip-based mode shares for different transport modes.

Table 4-1 Trip-based mode share in London (Transport for London, 2014)

Percentage of Trips				
Year	**Public Transport**	**Private Transport**	**Cycle**	**Walk**
1993	24%	50%	1%	25%
1994	25%	49%	1%	25%
1995	25%	49%	1%	24%
1996	26%	49%	1%	24%
1997	26%	48%	1%	24%
1998	27%	48%	1%	24%
1999	27%	48%	1%	24%
2000	28%	47%	1%	24%
2001	28%	46%	1%	24%
2002	29%	46%	1%	24%
2003	30%	44%	1%	24%
2004	31%	43%	1%	24%
2005	31%	43%	2%	25%
2006	31%	43%	2%	24%
2007	32%	43%	2%	23%
2008	34%	40%	2%	24%
2009	34%	40%	2%	24%
2010	34%	39%	2%	24%
2011	36%	38%	2%	24%
2012	36%	37%	2%	24%
2013	37%	37%	2%	24%

Public Transportation: There are four different rail systems across London: London Underground (Figure 4.6), Docklands Light Railway (Figure 4.7), Tramlink system (Figure 4.8) and London Overground (Figure 4.9). London Underground is the world's oldest rapid transit system catering to more than 3 million passengers every day. Bus is a significant lifeline to London and provides last-mile connectivity to most of the passengers. It has been one of London's biggest success stories with the number of bus journeys growing by 59.9% between 2000/01 and 2013/14.

Figure 4-6 London Underground (Singh, 2015)

Figure 4-7 Docklands Light Railway (The Guardian, 2012)

Figure 4-8 Tramlink System in London (Visit London, 2015)

Figure 4-9 London Overground (The Anonymous Widower, 2015)

All the rail modes have observed a significant growth in patronage year on year. For instance, the London Overground had a 9 percent increase in passenger journey in 2013/14 as compared to previous year (Transport for London, 2014). Currently, there is a proposal to start Night Tube, a London Underground Night service on select lines on Friday and Saturday.

Private Transportation: Cars are one of the most convenient modes of transportation and the highest used mode throughout the world. Over the years, car traffic has been growing exponentially throughout the world. However, London has seen a significant reduction in motor vehicle road traffic over the years especially in Central London. Outer London observed a decrease in vehicular traffic between 2000 and 2012, but there has been a slight increase in traffic since 2012. One of the reasons for continued reduction in traffic in Central London is the congestion pricing policy. Through this policy, vehicles entering certain areas of London at certain times of the day are required to pay a toll. The tolling mechanism has hindered the access to certain areas for free. People instead use public transportation to access those areas. Figure 4.10 indicates the trends in road traffic between 2000 and 2013.

The black taxis in London are historical and famous all over the world. There are 22,800 licensed taxis in London. However, the number of taxis has remained stagnant or reduced over the years. Lack of patronage, higher fares, and improved public transport system has reduced the demand for taxis. Another reason cited for reduced demand has been the growth of app-based taxis such as Uber and Hailo (Hill, 2015).

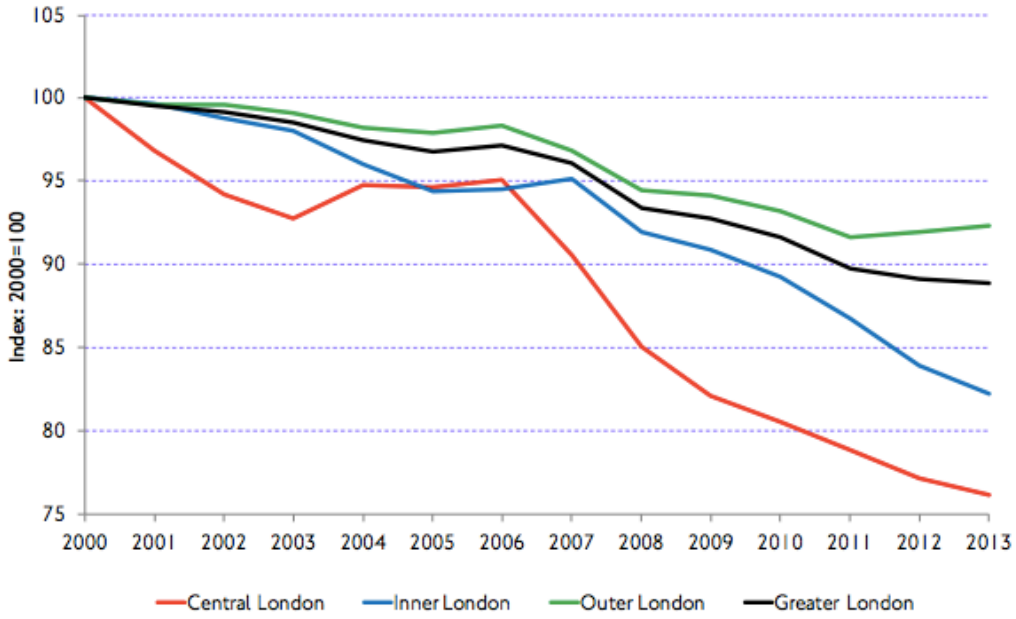


Figure 4-10 Trends in road traffic (vehicle-kilometers) (Transport for London, 2014)

Active Transportation: London has made huge investments on improving the bicycle infrastructure in the 21st century. To match that, there has been a steady growth in bicycle usage. Figure 4.11 shows the number of bicycles in different regions of London between 1976 and 2013. In March 2013, the Mayor of London launched the Mayor's Transport Strategy (MTS), which envisioned a 400 percent growth in bicycle patronage. The strategy focused on improving bike connectivity by focusing on promoting bike usage and improving safety. Santander Cycles (Figure 4.12) is London's bike sharing scheme through which people can hire a bike and ride it. There are 10,000 bikes and more than 700 dock stations all over London. This scheme is especially beneficial for tourists who would want to hire bikes for short time periods.

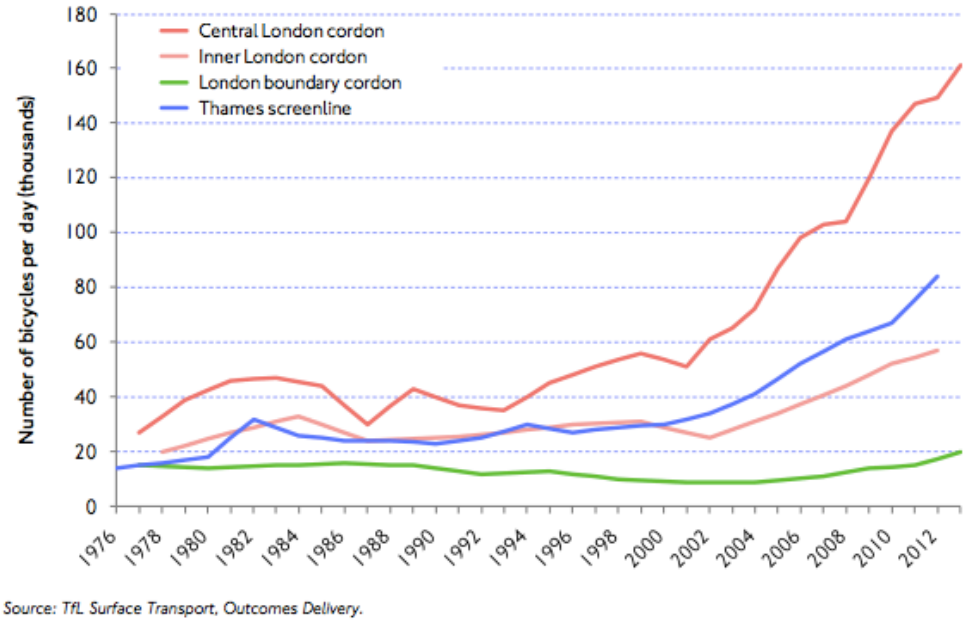
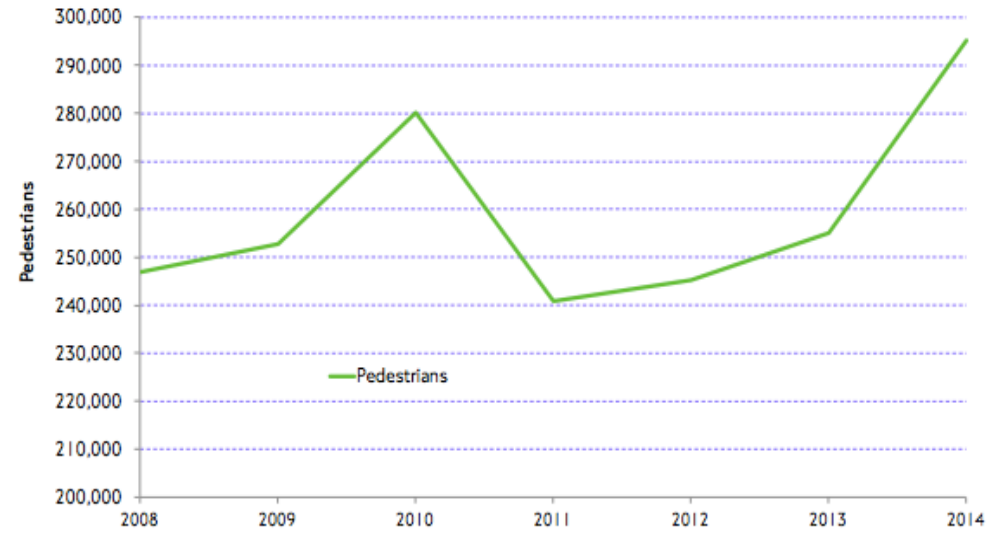


Figure 4-11 Number of bicycles in London (1976-2012) (Transport for London, 2014)

Figure 4-12 Santander bikes in London (Gizmodo, 2015)

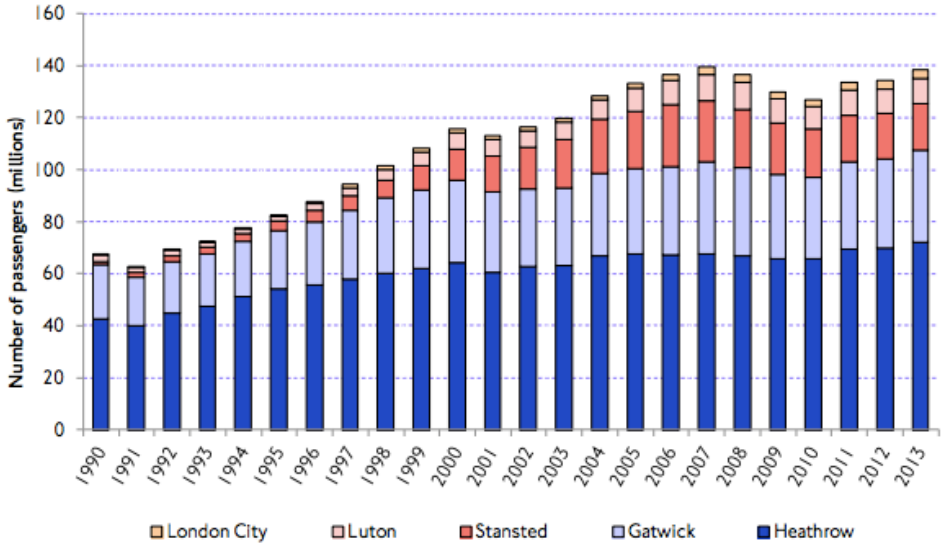
Walking in London is extremely convenient due to its pedestrian friendly infrastructure. As seen in Table 4.1, walking contributes to 24% of all trips across different modes. For instance, a study reported that 2014 observed the highest number of pedestrian volumes across Thames River (Transport for London, 2014). Figure 4.13 shows the result of the study. Some of the reasons attributed to high walking percentage in London are connected streets and active streets. Central London is extremely pedestrian friendly. The 'Walk London Network' connects key places across London through pedestrian friendly paths.



Source: TfL Surface Transport, Outcomes Delivery.

Figure 4-13 Weekday pedestrian volumes on Thames crossings (7am – 7pm) (Transport for London, 2014)

Other modes: London has five international airports with two of them (Heathrow and Gatwick) being some of the busiest airports in Europe. Heathrow Airport accounted for 52% of London's air passengers and Gatwick accounted for 25%. There has been a steady increase in number of passengers arriving by air to London except during the period of economic recession. Figure 4.14 shows the number of passengers across different airports between 1990 and 2013.



Source: Civil Aviation Authority.
Note: Terminal passengers are those passengers either joining or leaving an aircraft, including interlining and transfer passengers.

Figure 4-14 Number of passengers arriving at London across different terminals (Transport for London, 2014)

The Emirates Cable Car was launched in 2012 to transport people aerially across the River Thames (shown in Figure 4.15). It is 1 km in length and the duration of single crossing is 10 minutes (5 minutes at peak hours). However, since it's opening the patronage has reduced sharply inviting criticism. The reasons attributed to its reduced usage are high fares and improper location.

Figure 4-15 Emirates Cable Car (Visit London, 2015)

River transport has been extremely significant for attracting tourists and showcasing London (shown in Figure 4.16). Ferries are operated along River Thames and the canals across London for recreational purposes. There are 25 terminals across River Thames to provide ferry services located at places of importance. The river services have seen a strong growth in patronage across the years, with more than 8.4 million passengers using the services in 2013/14.

Figure 4-16 River Transport in London (City Cruises, 2015)

4.1.3. KEY FINDINGS

Some of the notable aspects of transportation system in London that can possibly affect tourism are;

a. A significant night economy that could boost tourist's interest in the city's nightlife. With some of the transportation services available 24 hours, higher number of tourists can avail these services.
b. Wide range of options connecting the city to the suburbs and extensive transit network in the suburbs.
c. Extensive pedestrian connectivity with wide sidewalks and safe crosswalks.
d. Congestion pricing in Central London reducing the number of private transportation, hence, reducing the congestion.
e. Expensive taxi service as compared to public-transportation system. Taxis have seen a tremendous drop in patronage over the years. This has also helped reduce congestion in key tourist areas.
f. Effective marketing strategy with tourist information kiosks and booths spread all over the city. This has enabled better pedestrian interaction with the city.
g. Clear directions to important locations and easy to access paths.
h. Bike and pedestrian paths connecting important locations across London.
i. Extensive research on the transportation mode choices and the ease of transportation in the city.

4.2. COPENHAGEN

Copenhagen is the capital and the largest city of Denmark. The city is also the largest in the Scandinavian region. It is a representative of Denmark's history, culture and economic life. The total urban area is 1980 km^2 with a population of 580,000 in the city (Statistics Denmark, 2015).

4.2.1. AS A TOURIST DESTINATION

Tourism plays a huge role in the economy of Denmark and Copenhagen, in particular. Tourism creates a turnover close to $12 billion every year (Visit Denmark, 2015). It also represents 3.6% of Danish exports. Most of the tourists to Copenhagen are from Germany. Foreign tourists contribute $1.8 billion to city tourism and are extremely important for the sustenance of tourism sector in the country. The reasons for choosing Danish cities as a holiday destination by domestic and international tourists is illustrated in Figure 4.17.

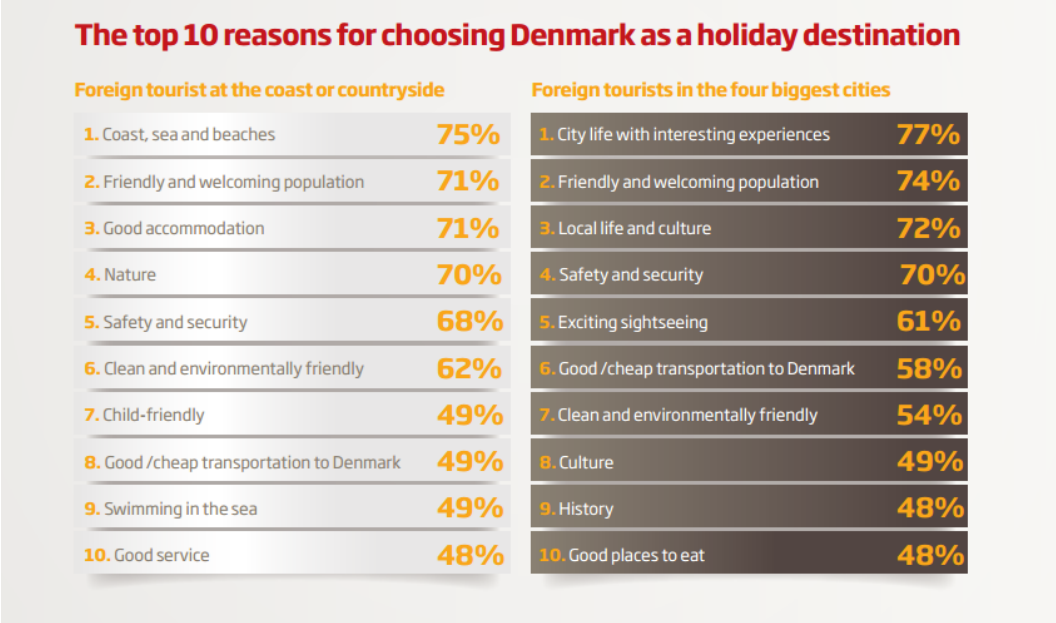


Figure 4-17 Reasons for choosing Denmark as a holiday destination (Visit Denmark, 2015)

From Figure 4.17, we can observe that restaurants and shopping is not the priority of tourists visiting Danish cities but rather to experience the city's culture and the friendly people. This indicates the country's importance given to building social relationships between the hosts and tourists. Some of the most visited destinations in Copenhagen are Tivoli Gardens, Christiansborg Palace, Nyhavn Harbor, The Round Tower, Amalienborg Castle, Stroget Shopping Mile and Rosenborg Palace.

Figure 4-18 Rosenborg Castle - Tourist destination in Copenhagen (John and Kristie, 2015)

4.2.2. TRANSPORTATION IN COPENHAGEN

Copenhagen is home to a variety of transportation systems on land as well as on water. The city is well connected within and outside the region.

Public Transportation: The city has three public transportation systems: Bus, Metro and Trains. The S-train network connects the city center with the outer boroughs of Copenhagen. It was started in 1934. S-train currently operates on 106 miles of track and serves 84 stations (Visit Copenhagen, 2015). Figure 4.19 depicts the S-train in Copenhagen.
There are three bus systems in Copenhagen, namely, A-Bus, S-Bus and N-Bus. The A-Buses provide connectivity within the central Copenhagen and run at a frequency of 3-7 minutes and serve at all hours. The S-buses drive every 5-10 minutes but stop at fewer stops than A-Bus. The N-Buses are night service buses (Visit Copenhagen, 2015). Figure 4.20 shows the bus service in Copenhagen.

The Copenhagen Metro is a rapid transit system opened in 2002 (refer Figure 4.21). It has two lines and supplements the S-train system. In 2014, Metro carried 56 million passengers (Copenhagen Metro, 2015). The Metro has 22 stations of which 9 are underground.
There are regional train services that connect to other cities of Denmark and Sweden. There are three system of local trains at the suburbs which are connected to the S-train network.

Figure 4-19 S-Train, Copenhagen (Hurley, 2015)

Figure 4-20 Bus service in Copenhagen (Public transport, 2015)

Figure 4-21 Copenhagen Metro (UITP, 2012)

Private Transportation: Copenhagen as a large network of roads and it is well connected with other Danish cities and Sweden. The completion of Oresund Bridge has helped the connectivity of Copenhagen to Sweden. Taxi services are available throughout the city.

Active Transportation: Copenhagen is one of the most pedestrian and bike friendly cities in the world. Car-free pedestrianized streets were first established in Copenhagen many years ago (Villadsen, 2012). The car-free street was 1.1 km in length and remains one of the longest pedestrianized streets in Europe (see Figure 4.22).

Figure 4-22 Pedestrian Street in Copenhagen since 1962 (Copenhagen Net, 2015)

Biking is the most prominent transportation mode in Copenhagen. In 2012, people cycled 1.27 million km each day (City of Copenhagen, 2012). Bicycle share of trips to work or education rose from 30% to 365 between 1996 and 2012. Figure 4.23 shows the mode share of different modes of transport in Copenhagen. 95% of the residents of Copenhagen are satisfied with Copenhagen being a cycling city.

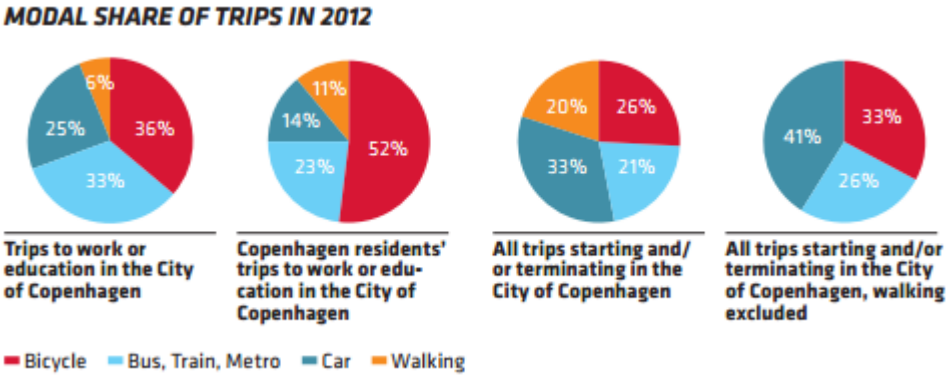


Figure 4-23 Mode Share in 2012 (City of Copenhagen, 2012)

The pedestrian and bike infrastructure in the city facilitate easy access to important destinations in the city. Wide and clearly marked sidewalks aid the movement of people. Double lane bike lanes are a common sight throughout the city. To reduce travel distance, bike only paths are constructed crisscrossing the city. Figure 4.24, Figure 4.25 and Figure 4.26 provide an insight to the bike and pedestrian infrastructure in Copenhagen.

Figure 4-24 Double bike lanes and wide sidewalks (CPH News, 2014)

Figure 4-25 Exclusive bike lanes in Copenhagen (Bike It, 2015)

Figure 4-26 Priority given to bikes within the train (Madsen, 2011)

Other modes: Copenhagen airport is the largest airport in Scandinavia and the 17th largest airport in Europe. Trains and buses connect the Airport with Downtown Copenhagen. Roskilde Airport is the other major airport located 19 miles to the west of Copenhagen. Low-cost airlines and charter operators mostly use this airport.

Copenhagen is well connected by waterbuses, known as Copenhagen Harbor Buses (see Figure 4.27). There are 10 waterbus stops and connects the main Harbor which is a major destination for cruise ships. Cruise ships attract a huge number of visitors to Copenhagen and the Copenhagen Port is one of Europe's leading cruise ports (see Figure 4.28).

Figure 4-27 Copenhagen Harbor Bus (Welcome to My Copenhagen, 2015)

Figure 4-28 Copenhagen Cruise Port (Visit Copenhagen, 2015)

4.2.3. KEY FINDINGS

Some of the unique transportation infrastructure elements that define the city are;

- **a.** Separate markings for bike entry into trains on the station platform. Also, indicating bicycle spaces on the train and providing bike rack within the train.
- **b.** Priority given to pedestrian and bike safety with proper markings and barriers on streets.
- **c.** Key shopping and tourist corridors turned to pedestrian and bike exclusive streets.
- **d.** Bike boulevards along many streets.
- **e.** Bike and pedestrian signaling at all intersections.
- **f.** Right of way reserved to pedestrians and bikes.
- **g.** Developing the city as a major cruise terminal has attracted huge number of tourists.
- **h.** Connectivity to Sweden has increased the number of visitors from Sweden.

4.3. NEW YORK CITY

New York City is the most populous American city and a global power city. The city is home to 8.4 million people in 2014 (U.S. Census, 2015). The city is the headquarters of the United Nations, making it an important center for International diplomacy. The city was founded as a trading post in 1624 by the colonists of Dutch Republic (United States History, 2015). The City served as the capital of United States between 1785 and 1790. The Statue of Liberty located in the city greeted millions of immigrants in the 19th and 20th centuries and is a symbol of United States. Figure 4.29 shows the Statue of Liberty.

Figure 4-29 Statue of Liberty with the New York City skyline (Polland, 2013)

4.3.1. AS A TOURIST DESTINATION

	New York City	New York State	USA
Internet usage			
For information	45%	44%	43%
For booking	33%	33%	29%
Travel agent usage			
For information	37%	37%	37%
For booking	42%	42%	43%
Use of travel package	13%	13%	17%
Main Purpose of trip			
Leisure	60%	59%	54%
Business	14%	14%	18%
Visit multiple states	49%	49%	33%
First time travelers	36%	35%	25%
Type of transportation used while here			
Taxi/limo	55%	55%	41%
Public transportation	45%	44%	26%
Car rental	19%	20%	30%
Activities favored			
Shopping	90%	90%	88%
Dining	85%	85%	84%
Historical sites	61%	60%	40%
Sightseeing	59%	59%	45%
Art galleries/museums	46%	46%	24%
Performing arts	31%	30%	17%
Data source: Office of Travel and Tourism Industries, International Trade Administration, U.S. Department of Commerce			

Figure 4-30 Most preferred activities in New York City (Xenias & Erdmann, 2011)

New York City recorded 52 million tourists in 2012 with 11 million international visitors (NYC & Company, 2012). More than 714,000 jobs were sustained by tourism activity in 2012. A study conducted by the Office of Travel and Tourism Industries revealed that shopping and dining were the most preferred activities of international tourists to New York City (Xenias & Erdmann, 2011). The results are illustrated in Figure 4.30.

Some of the most frequented destinations by tourists to New York City are Statue of Liberty and Battery Park, Fifth Avenue, Empire State Building, Brooklyn Bridge, Central Park, Broadway and Shubert Alley, Times Square, Rockefeller Center, Wall Street and St. Patrick's Cathedral. Figure 4.31 shows the bike and pedestrian lanes on the Brooklyn Bridge. Figure 4.32 shows the Empire State Building-one of the most visited tourist destinations in New York City.

Figure 4-31 Brooklyn Bridge, New York City (Brooklyn Bridge Bike Rent, 2015)

Figure 4-32 Empire State Building (Empire State Realty Trust, 2015)

4.3.2. TRANSPORTATION IN NEW YORK CITY

New York City has a complex and extensive transportation system to meet the needs of the huge population.

Public Transportation: The city's public transportation network is one of the most extensive and oldest transportation systems in North America. Rail is the most dominant transportation system in New York City. The Subway system in the city the largest subway system in the world with 656 miles of track (see Figure 4.33). The Subway system operates 24 hours in a day and runs to all areas of New York City except the Staten Island. PATH (Port Authority Trans-Hudson) is a rapid transit system that connects Manhattan in New York City to New Jersey. PATH operates throughout the day. New York's commuter rail system is one of the most extensive in the world with more than 250 stations within the region.
The bus system in New York City had an average ridership of 2.5 million each day in 2014 (MTA, 2015) (see Figure 4.34). There are 238 local routes, 7 Select Bus Service and 62 express bus routes in New York City. The city owns a fleet of 5,710 buses in 2014 (MTA, 2015). Areas without subway and bus services are connected through dollar vans, jitneys and Chinese vans (see Figure 4.35). They are mostly privately owned but provide extensive connectivity at cheap prices.

Figure 4-33 New York Subway (Myers, 2011)

Figure 4-34 New York City Bus Service (Walks of New York, 2015)

Figure 4-35 Jitney/Dollar Vans in New York City (Brokelyn, 2012)

Private Transportation: New York City has one of the lowest car usages in America. Manhattan has a well-planned grid system. The city is home to four Interstate Highways. Despite more than 48% of the residents owning cars, only 30% use their vehicles due to high congestion in the city. New York City is famous for its yellow cabs and the drivers are New York City icons. Large numbers of taxi drivers are foreign-born.

Active Transportation: New York City has an extensive pedestrian and bike infrastructure. Manhattan area is extremely pedestrian friendly and the connectivity with the subway system enhances the pedestrian network. Cycling has been growing in New York City over the years. The City has a number of bicycle projects in construction throughout the city. After the completion of construction, the city expects tripling of bike share from the current ridership. Protected bike lanes are being planned at multiple locations to avoid interaction with the traffic, especially in Manhattan. Figure 4.36 shows a protected bike lane in Brooklyn, New York.

Figure 4-36 Protected Bike Lanes in Brooklyn, New York (Andersen, 2014)

There are numerous bike rental services in the city and the City operates a bike share service partnering with Citi. The Citibike is located at multiple locations throughout the city (see Figure 4.37).

Figure 4-37 Bike Sharing in New York City (Zevitz, 2013)

Other Modes: New York City is home to three airports: John F. Kennedy (JFK), LaGuardia and Newark Liberty Airports. Rail services are available from JFK airport and Newark Liberty airports. AirTran JFK is the rapid transit system that connects JFK to subway system. AirTran Newark connects the airport to inter-city trains.

The Roosevelt Island Tramway is an aerial tramway system that connects Roosevelt Island to the Upper Eastside of Manhattan. It is 940 m in length and carries up to 115 people on a single trip. The Staten Island Ferry is one of the busiest in the United States (see Figure 4.38). It carries more than 19 million passengers every year on a 5.2 mile route. There are also numerous ferry services connecting Manhattan to Jersey area.

Figure 4-38 Staten Island Ferry (Ho, 2011)

4.3.3. KEY FINDINGS

a. Statue of Liberty, as a symbol of New York City and America, has helped the growth of tourism in the city. The ferry services to the monument add pleasure to the tourist's experience.
b. Provision of bike lanes along the historic Brooklyn Bridge has benefitted bikers' and tourists immensely.
c. Pedestrian-only environment such as New York Highline boosts tourism.
d. Dense urban environments promote walking and discourage car usage.
e. Presence of privately operated dollar vans/jitneys promotes connectivity to transit inaccessible areas.
f. Protected bike lanes to avoid interaction with traffic in congested areas.
g. Multi-lingual taxi drivers provide easy access to information for the tourists.

4.4. CHICAGO

Chicago is located in Illinois, USA. The city has a population of 2,722,389 in 2014 in 237 square miles of land (U.S. Department of Commerce). Chicago is home to dozens of cultural institutions, historical sites and museums. There are more than 200 theaters, 200 art galleries, 7300 restaurants, and 522 parks (City of Chicago, 2015). Chicago was incorporated as a city in 1837 and houses the tallest building in Western Hemisphere – Willis tower (City of Chicago, 2015). The city burst into the international tourism circuit through the World's Columbian Exposition in 1893.

4.4.1. AS A TOURIST DESTINATION

Chicago received more than 50 million visitors in 2014. Figure 4.39 shows the total visitation between 2010 and 2014. The city is 9th most visited city by overseas visitors with more than 1.55

million tourists in 2014. The number of leisure domestic visitors to Chicago rose by 3.5% in 2014 as compared to 2013 to 37.33 million visitors (Choose Chicago, 2014).

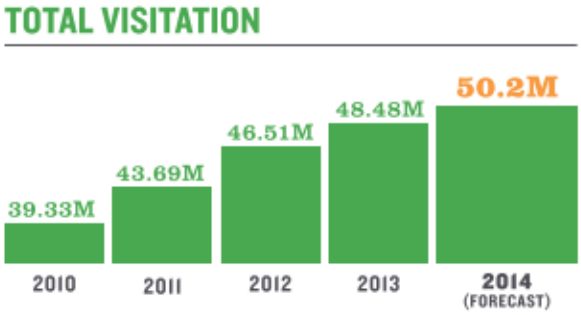


Figure 4-39 Number of Visitors to Chicago (2010-2014) (Choose Chicago, 2014)

The city recorded 75.68% hotel occupancy rate in 2014 which is a new record with 10.24 million rooms occupied in 2014. The number of leisure room nights rose to an all-time high of 6.43 million (Choose Chicago, 2014). The City launched the first-ever cultural tourism strategy to promote the city as premier cultural destination. Events such as Chinese New Year, Chicago Restaurant Week and Chicago Theatre Week helped boost the tourism sector. Chicago partnered with Department of Business Affairs and Consumer Protection to develop neighborhood for tourism. Figure 4.40 shows the selected neighborhoods for attracting tourism.

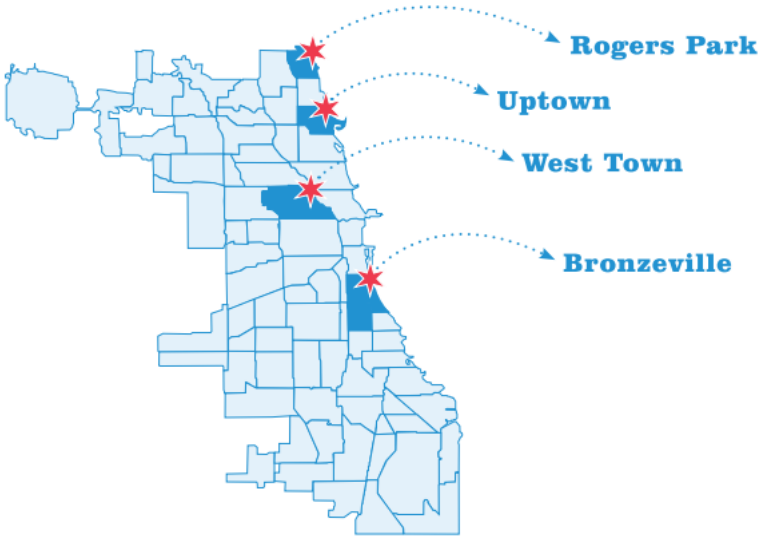


Figure 4-40 Neighborhoods chosen for tourism development (Choose Chicago, 2014)

To boost international tourism, the city participated in tradeshows, held campaigns and opened tourism offices in many countries all over the world. The number of tourism generated jobs increased to 133,800 in 2014 and the direct tourism spending increased to $13.7 billion in 2014. Figure 4.41 shows the growth in jobs generated through tourism between 2010 and 2014. The total tax revenue from tourism related industries are $871 million in 2014 (Choose Chicago, 2014).

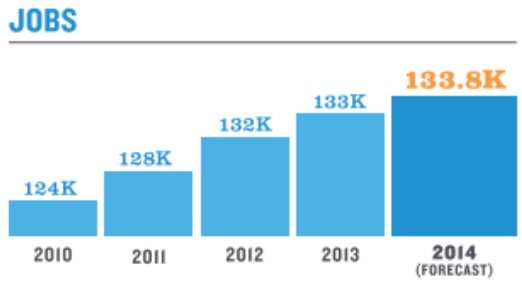


Figure 4-41 Jobs generated through tourism (2010-2014) (Choose Chicago, 2014)

Some of the most visited attractions of Chicago are Art Institute of Chicago, Millennium Park, Michigan Avenue and Magnificent Mile, Navy Pier, Willis Tower SkyDeck, Wrigley Field and Lincoln Park. Figure 4.42 shows the Navy Pier and Figure 4.43 shows Cloud Gate at Millenium Park, the two most commonly visited places by tourists in Chicago.

Figure 4-42 Navy Pier – Chicago (Chicago Genie, 2015)

Figure 4-43 The Bean, Chicago (Chicago Traveller, 2015)

4.4.2. TRANSPORTATION IN CHICAGO

Chicago has multiple transportation options with an extensive transit coverage. Being the third largest American city, it is a major transportation hub. The city has a high share of private transport (63%) among the major tourist cities in the world. Figure 4.44 illustrates the mode share in 2008.

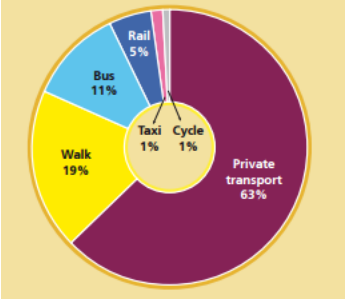


Figure 4-44 Mode Share in Chicago (Land Transport Authority, 2011)

Public transportation: Chicago is home to second largest public transportation system in United States. It is operated by the Chicago Transit Authority (CTA) in the City of Chicago and the 40 neighboring suburbs. The service is provided 24 hours a day and on all days of the week. The bus services recorded a patronage of 276,116,759 and the rail services had a patronage of 238,100,054 in 2014 (Chicago Transit Authority, 2015). The train services cover 222 miles of track and cover 144 stations in Chicago. The elevated 'L' train route serves the City of Chicago and some of the suburbs. Figure 4.45 depicts the 'L' route. CTA also operates buses along 140 routes covering 2,230 route miles. However, the train and bus services saw a dip in patronage between 2012 and 2013 (Chicago Transit Authority, 2014).

Pace provides suburban bus transit services in Chicago (see Figure 4.46). The total ridership in 2013 was 39,924,493 and the services cover an area of 3,446 square miles (Pace Bus, 2015). Additionally, Pace provides vanpool and paratransit services to suburban areas. Amtrak owns and operates the Union Station, which provides inter-city connectivity from Chicago.
The City of Chicago earlier operated free tourist trolleys in Downtown connecting key tourist attractions. It was discontinued in 2009 and currently private operators offer these services at nominal prices.

Figure 4-45 Chicago's 'L' Train System (Garfield, 2015)

Figure 4-46 Chicago Buses providing access to key shopping locations (CUHMMC, 2015)

Private transportation: As seen in figure 4.44, the city has a high share of private transportation system despite having an excellent transit infrastructure. The city has seven major expressways passing through it and numerous state routes connecting the city to other cities in the state. The city predominantly has a grid pattern of streets. The density of streets in Downtown Chicago is much higher than in other areas. Private operators in Chicago operate taxis but have to be licensed by the City for their operation.

Active transportation: Chicago has a high walking percentage among American cities due to its extensive pedestrian infrastructure and connectivity to important locations throughout the city. Downtown Chicago has wide sidewalks and pedestrian signals at every intersection. The trail along the river is a major tourist attraction and extensively used for walking and jogging. The city prepared a pedestrian plan to connect key neighborhoods and parks through a complete street approach. Numerous studies have suggested prioritizing pedestrian safety during the process of developing complete streets in Chicago (Department of Transportation, 2015).

The city has a low biking share as compared to other modes of transport. The City has prioritized the biking infrastructure improvements through the complete streets approach to boost the bike share. Divvy, a bicycle-sharing program, was launched in 2013 to promote bike usage in the city (see Figure 4.47). There are more than 4,000 bikes located at 400 stations throughout the city (Divvy Bikes, 2015). There is an 18-mile multi-use path along Lake Michigan called the Lakefront Trail, which is one of the premier biking paths in the city. The path connects key tourist attractions in the city. Figure 4.48 shows the Lakefront Trail in Chicago.

Figure 4-47 Divvy Bikes (Huffington Post, 2014)

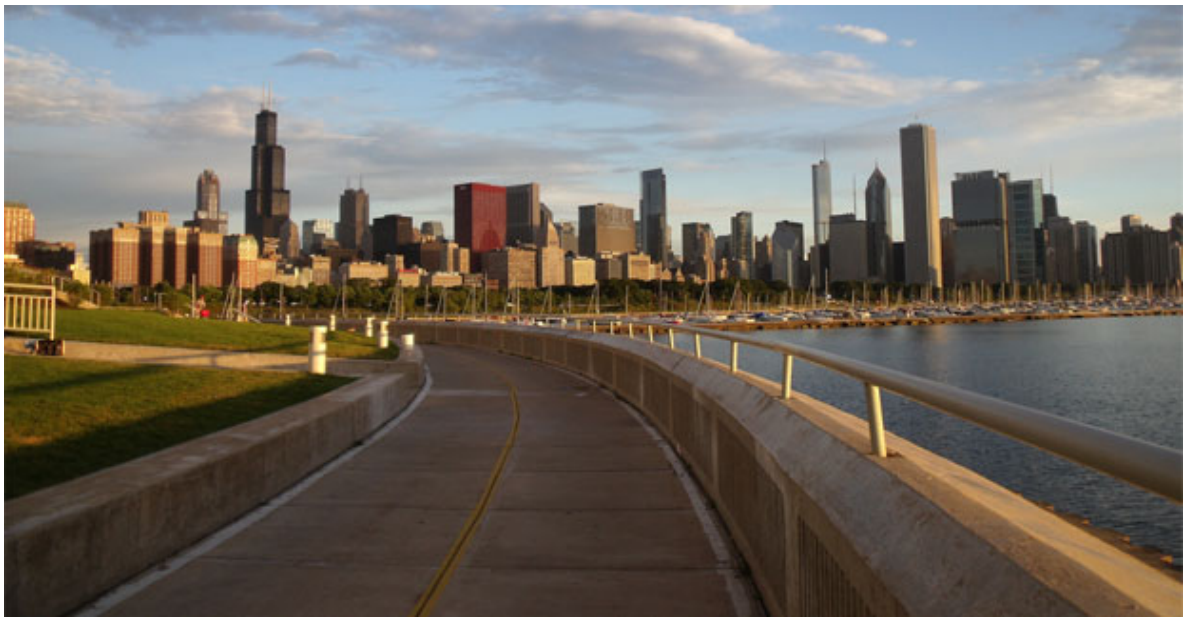


Figure 4-48 Lakefront Trail, Chicago (Lempinen, 2015)

Other Modes: Water taxi services are offered along the Chicago River connecting Navy Pier with key Downtown locations. It is often used by the tourists to have a varied experience of the city.

Chicago is home to two major airports: Chicago O'Hare Airport and Chicago Midway International Airport. Chicago O'Hare Airport is the busiest airport in the world in 2014 in terms of flight landing and takeoff. It served 70,075,204 passengers in 2014 (Chicago Department of Aviation, 2015).

4.4.3. KEY FINDINGS

Chicago presents a number of tourism friendly transportation initiatives as discussed below,

a. A comprehensive pedestrian plan to improve the pedestrian infrastructure within the city has helped in providing tourists with a better infrastructure.
b. Trails within the city to key locations promote tourism connectivity.
c. Free trolley services to key locations may boost tourist growth.
d. Extensive transit connectivity to the suburbs from Chicago.
e. Water taxi services help in tourist's exploration of the city.
f. Divvy bikes provided along the trail and at key tourist locations.
g. Grid pattern of city promotes pedestrian infrastructure.
h. Extensive intra-city and regional connectivity through Amtrak and multiple airports.
i. 'Choose Chicago' agency exclusively focusing on promoting tourism as a collective organization.
j. The Loop service in Downtown Chicago provides easy access to the important tourist destinations in the city, thereby reducing the number of transfers.

4.5. EVALUATION OF TOURISM IN CITIES

The World Tourism Cities Federation (WTCF) has proposed to develop a 'World Tourism City Development Index' that evaluates cities worldwide in terms of tourism cities development level and progress (World Tourism Cities Federation, 2014). The comprehensive index developed by WTCF consists of six indexes: the tourism prosperity index, tourism development potential index, tourism attraction index, support for tourism index, tourism satisfaction index, and the tourism awareness index. Among these indices, the tourism attraction index is most relevant to this paper as it "reflects a city's attractiveness to tourists in terms of tourism resources, infrastructure, and environment, all which can express a city's tourism charm" (World Tourism Cities Federation, 2014). The factors considered under the tourism attraction index are presence of world heritage sites, the number of international conventions, environment quality, and the number of air traffic routes. The index does not consider any infrastructure factors that reflect a city's attractiveness. To further strengthen the index, the paper considers additional factors such as the number of transit modes, pedestrian and bike infrastructure, density of urban roads, affordability of public transportation services, road safety and congestion in cities. The number of international conventions factor is not considered as the paper focuses on recreational tourism.

The factors are evaluated using a weight assignment approach that is determined based on the subjective opinion of the author. London has the most number of world heritage sites (4) followed by Copenhagen (2) and New York City (1). Chicago does not have any world heritage site. Environmental quality strongly relates to quality of life in cities. The factor encompasses issues such as vulnerability to climate change, record of natural disasters, and air and noise pollution levels. London, Copenhagen and New York City are prone to the effects of climate change and higher probability of natural disasters (Swiss Re, 2013). The number of air traffic routes measures the domestic and international tourists accessibility to the city. The number of transit modes factor considers the feasibility of travel within the city without the need of a personal vehicle. London has seven transit mode options, whereas Chicago and Copenhagen each have four transit mode choices. The pedestrian and bike infrastructure factor considers attributes such as availability of pedestrian friendly sidewalks and protected bike lanes, trails connecting tourist areas, bike sharing system, right of way priority to pedestrians and bikes, presence of pedestrian only streets and bike boulevards, and provision of holding space for bikes on transit. The congestion in cities factor is measured based on the TomTom Index that considers the comparison of travel times between congested and non-congested periods (free flow conditions). The density of urban roads within the city limits provides an opportunity to understand the density of urban roads and feasibility of pedestrian, bike and transit infrastructure. The value is estimated by dividing the number of urban road miles with the total area. London has the maximum number of road miles (9,223 miles) (Greater London Authority, 2016) and Atlanta has the least number of road miles within the city boundary (1,700 miles) (AJC, 2012). Road safety is measured in terms of number of traffic related deaths per 100,000 population. Chicago has 5.3 deaths per 100,000 population, New York City has 3.2 deaths, Copenhagen has 3.0 deaths and London has 1.6 deaths per 100,000 population (Weller, 2015). The affordability of public transportation services factor is based on the pricing of transit services in each of these cities. Considering the average fare for each trip, Chicago has the cheapest public transportation service and Copenhagen has the most expensive public transportation system (Price of Travel, 2010).

A weighted-ranking approach is used to determine the tourism attraction index for the cities. Each factor is ranked between 0 and 10 with 0 indicating poor and 10 indicating outstanding. The ranking is relative to the other cities used in the analysis. Each of the factors is weighted (totaling 100) based on its influence on tourism attraction potential. Table 4.2 provides the ranking for different factors and the weights allotted to each factor. Cells highlighted in green indicate the highest ranked values corresponding to each factor. Table 4.3 summarizes the results obtained from the analysis. London has the highest tourism attraction index (670), closely followed by Copenhagen (665) and New York City (630). Chicago has a tourism attraction index score of 575. Employing a transportation based attractiveness index measure suggests that London has the highest potential for tourism.

Table 4-2 Estimation of Tourism Attraction Index

Factor	Factor Weight	London	Copenhagen	New York City	Chicago
Environmental quality	10	6	6	2	4
Number of air traffic routes	10	10	4	9	7
Pedestrian and Bike infrastructure	15	7	10	6	5
Traffic Congestion	15	2	8	4	6
Density of urban roads	15	8	7	8	6
Affordability of public transportation	10	4	3	7	8
Road Safety	10	8	7	6	4
Number of transit modes	15	9	6	8	6
Total	**100**				

Table 4-3 Tourism Attraction Index for the cities

Ranking	Score
London	670
Copenhagen	665
New York City	630
Chicago	575

5. THE CASE OF ATLANTA

Atlanta is the capital and most populous city of Georgia. The City of Atlanta has a population of 456,002 in 2014 and occupies an area of 133.15 square miles (U.S.Census, 2015). The City of Atlanta came into existence on December 29, 1847. The city originated at a point of intersection of two railway lines. The city is located in the foothills of Appalachian Mountains. Atlanta does not have a strong historic architecture due to its recent origin.

5.1. TOURISM IN ATLANTA

Atlanta is the 7th most visited city in America with 35,400,000 domestic visitors (Forbes, 2010). The number rose to 45,000,000 visitors in 2013 (ACVB, 2015) and the total domestic visitor expenditures amounted to $13 Billion in 2013 (ACVB, 2015). In 2014, 1,084,455 international tourists visited Atlanta, observing an average 6% annual growth (NTTO, 2015). The leisure and hospitality industry employed 240,000 Atlanta residents in 2014 (ACVB, 2015). Since the 1996 Olympic games in Atlanta, the number of tourist destinations in the city has been on a steady growth (Southerland, 2012). Georgia Aquarium, located near Centennial Olympic Park in Downtown Atlanta, has played a role of a catalyst in stimulating tourism in the city (see Figure 5.1). It is the largest aquarium in the western hemisphere and draws more than 2 million visitors each year (Georgia Aquarium, 2015).

Figure 5-1 Georgia Aquarium (LadyoftheZoos, 2012)

The city being home to Martin Luther King Jr. and a "hotbed of civil rights activism" (Southerland, 2012), the Martin Luther King Jr. Historic Site attracts a huge number of tourists every year (See Figure 5.2). Most of the tourist destinations in Atlanta are concentrated in and around Downtown Atlanta. Downtown Atlanta is well connected with the rest of the city and the airport. Heavy rail and streetcar facilities are available in this part of the city. The other widely

visited tourist destinations in the city include The World of Coca Cola, The Children's Museum of Atlanta, The CNN Center, High Museum of Art, Zoo Atlanta, Atlantic Botanical Garden, Margaret Mitchell House & Museum, Piedmont Park, Oakland Cemetery and National Center for Civil and Human Rights.

Figure 5-2 Martin Luther King Jr. Historic Site (Erik, 2012)

Sports played a crucial role in developing the tourism industry in Atlanta. It started with the hosting of Olympic Games in 1996. The announcement of the Games launched more than $1 billion of construction projects in Atlanta (Lohr, 2011). The Centennial Olympic Park was a part of $5 billion impact on Atlanta's economy (Lohr, 2011) (See Figure 5.3). The Games triggered a number of recreational projects in the city and put Atlanta on the tourist map of the world. The Games played a crucial role in urban regeneration of the city. Atlanta has it all when it comes to sports. Huge stadiums for baseball, football, basketball and successful teams such as Braves, Hawks and Falcons. The College Football Hall of Fame, opened in 2014, is a museum dedicated to College Football. The games and sports facilities attract a number of tourists from the state and the rest of the country.

Figure 5-3 Fountain of Rings (Centennial Olympic Park, Atlanta) (Encyclopedia Brittanica, 2016)

5.2. TRANSPORTATION IN ATLANTA

Atlanta is a heavily car-dependent city with more than 76% of population commuting to work by car (U.S. Census, 2015). 10.6% of the working population took public transport to work and 4.7% of the population walked to work. Only 1.55% of population took bicycle, motorbike or taxi to work. The city has an extremely low bike share among major cities of America.

Public Transportation: Metropolitan Atlanta Rapid Transit Authority (MARTA) operates Atlanta's public transportation system. MARTA operates both rail and bus services within the City of Atlanta. The MARTA rapid rail system has 47.6 miles of railroad tracks and serves 38 locations (see Figure 5.4). MARTA's bus system serves a wider area than the rail system, however, predominantly connects the neighborhoods to the rail stations. MARTA bus operates on 91 routes with 554 compresses natural gas and diesel buses. GRTA (Georgia Regional Transit Authority) provides bus service connecting suburban Atlanta to Midtown and Downtown Atlanta. Emory University operates The Cliff shuttle bus system that connects the Emory University's Druid Hills campus to City of Atlanta.

Figure 5-4 MARTA rail service in Atlanta (Allison, 2014)

The Streetcar system in Downtown Atlanta was opened in 2014 and operates at a length of 2.7 miles (see Figure 5.5). There are 12 stations along the line and the track runs along the traffic. The streetcar system connects key tourist places in Downtown area and further expansion of streetcar is being planned.

Figure 5-5 Atlanta Streetcar (Howard, 2015)

Private Transportation: Atlanta's heavy reliance on private vehicles is reflected through the extensive interstate and roadway network through the city. The city is home to numerous Interstates and most of the roads are designed to accommodate vehicular traffic. With roads crisscrossing major neighborhoods across the city, pedestrian and bike infrastructure is severely hampered. The city is also one of the most congested cities in America and often violating Air Quality Standards. There are numerous taxi services within the City of Atlanta along with ride share services such as Uber and Lyft.

Active Transportation: The pedestrian and bike infrastructure is extremely limited across the City of Atlanta, especially in the poorer neighborhoods of Atlanta. Downtown Atlanta has a poor bike and pedestrian network, which prevents many people from exploring the city by walking or biking. However, there are numerous trails that originate in the City and connect the suburban parks. BeltLine is a multi-use path corridor that connects key neighborhoods of Atlanta (see Figure 5.6). Figure 5.7 shows the map of BeltLine trail corridor.

Figure 5-6 Atlanta BeltLine Trail (Stark, 2014)

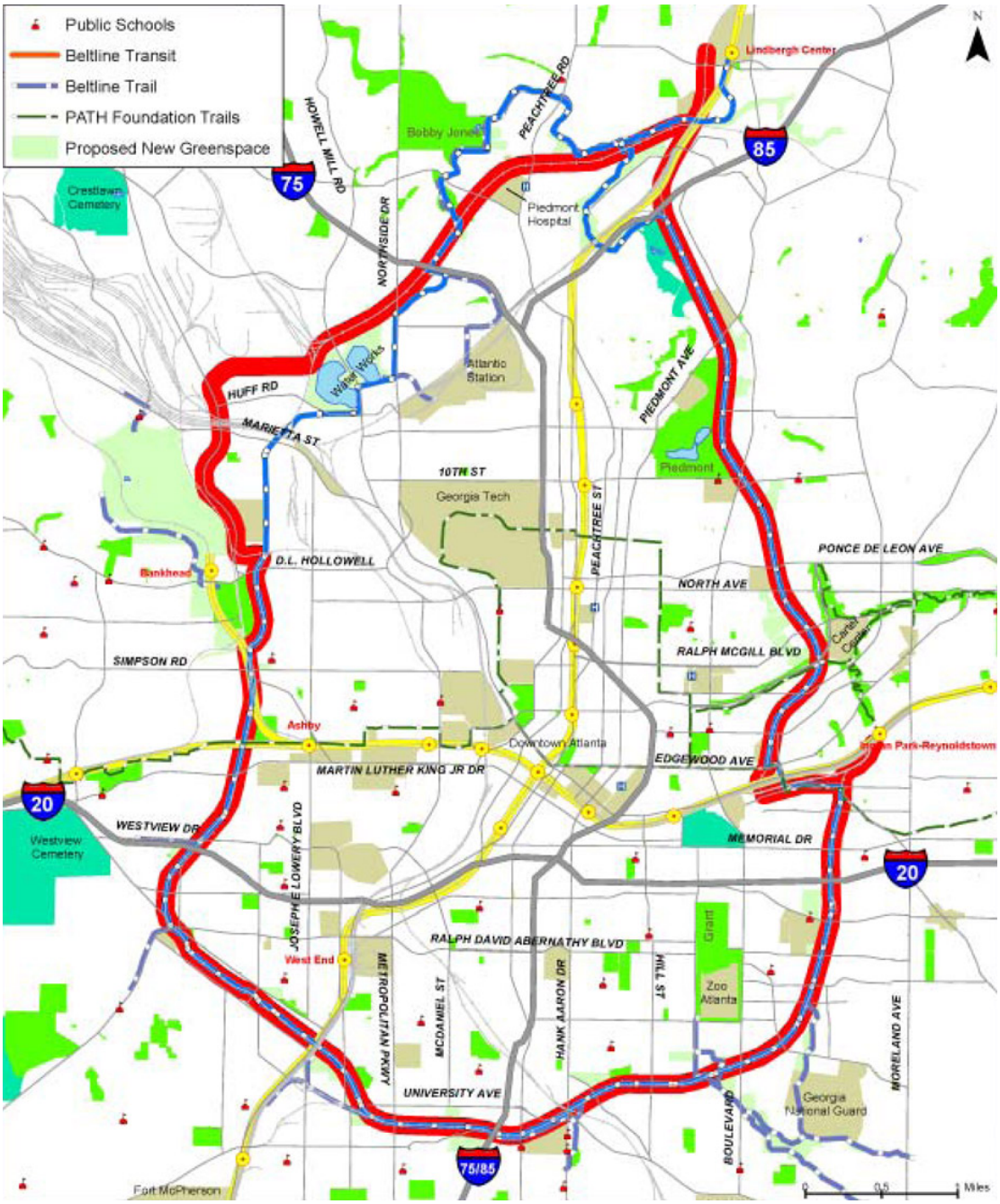


Figure 5-7 Atlanta BeltLine Map (Stylepinner, 2015)

Other modes: The Atlanta Hartsfield-Jackson Airport is one of the world's busiest airport in terms of passenger traffic. The Airport has more than 2700 arrivals and departures every day. MARTA connects the airport to the city and numerous taxi services provide connectivity to airport. Parking lots are available at the airport for regular commuters in addition to car rental services.

5.3. COMPARING ATLANTA WITH OTHER CITIES

The Tourism Attractiveness Index measure, detailed in section 4.5, is used to estimate the attractiveness of tourism in Atlanta based on transportation infrastructure. Table 4.5 presents the weighting method used to estimate the index. The values corresponding to each of the factors for Atlanta is based on the transportation infrastructure analysis described in Section 5.2. Summarizing the transportation infrastructure and services in Atlanta, the city has three transit mode choices (Bus, Heavy Rail, and Streetcar). The transit fare in Atlanta is expensive than New York City and Chicago, but cheaper than London and Copenhagen. In terms of road safety, London is the safest and Atlanta is the least safe. Atlanta has the most number of road accident deaths per 100,000 population in the United States (9.7 deaths per 100,000 population) (Weller, 2015). Atlanta has consistently been ranked as the top toxic cities of the country (Forbes, 2009). The city is less prone to natural disasters and climate change as compared to London, New York City and Copenhagen (Swiss Re, 2013). According to the TomTom Index, Atlanta is ranked 96 in terms of traffic congestion among all the major cities in the world (TomTom, 2016). The city faces lesser congestion than New York City, London and Chicago but more than Copenhagen. The pedestrian and bike infrastructure in the city is significantly poorer than the other cities in the analysis. Atlanta's airport is the busiest airport in the world in terms of passenger traffic (Hetter, 2015) and has remained in the position for the past 18 years. However, in terms of air passenger traffic to all the airports in a city, London's airport system outperforms other cities. Table 5.1 describes the methodology used to estimate the tourism attractiveness index.

Table 5-1 Estimating Tourism Attractiveness Index - All Cities

Factor	Factor Weight	London	Copenhagen	New York City	Chicago	Atlanta
Environmental quality	10	6	6	2	4	5
Number of air traffic routes	10	10	4	9	7	8
Pedestrian and Bike infrastructure	15	7	10	6	5	2
Traffic Congestion	15	2	8	4	6	7
Density of urban roads	15	8	7	8	6	3
Affordability of public transportation	10	4	3	7	8	6
Road Safety	10	8	7	6	4	2
Number of transit modes	15	9	6	8	6	4
Total	**100**					

Table 5.2 presents the results of the Tourism Attractive Index scores. Atlanta scores the least among the five cities in the analysis. The city performs poorly in terms of safety, density of infrastructure, and availability of pedestrian and bike infrastructure. These factors have to be addressed in order to improve the tourism attractiveness in the city.

Table 5-2 Tourism Attractive Index - Results

Ranking	Score
London	670
Copenhagen	665
New York City	630
Chicago	575
Atlanta	450

Based on Pearce's definition (Refer Section 2.3), New York City, London, Chicago and Copenhagen satisfy all the requirements of tourist cities but Atlanta lacks in terms of 'high physical density'. All these cities are centrally located in the region, have multiple economic activities, and diverse population. The physical density varies widely between the cities, with New York City having the highest population density (27,857/sq mi) (US Census, 2013) and Atlanta having the least population density (3,360/sq mi) (US Census, 2014). The densities of other cities fall between New York City and Atlanta. Table 5.3 classifies the cities based on Pearce's definition. We can notice that all the cities are socially and culturally heterogenic, possess economic multi-functionalism and are centrally located. Atlanta lags behind the other cities in terms of physical density.

Table 5-3 Classification of Cities based on Pearce's definition

City	High Physical Density	Social and Cultural Heterogeneity	Economic multi-functionalism	Physical centrality
Atlanta	No	Yes	Yes	Yes
New York City	Yes	Yes	Yes	Yes
London	Yes	Yes	Yes	Yes
Chicago	Yes	Yes	Yes	Yes
Copenhagen	Yes	Yes	Yes	Yes

6. CONCLUSION AND RECOMMENDATION

Cities attract domestic and international visitors as they offer a range of travel and tourism related services, often very diverse and highly concentrated in a location (Vandermey, 1984). In general, cities provide visitors the opportunity to interact with the local people or institutions. Tourism can serve as a tool for urban regeneration and create a number of economic, social and environmental impacts on the city. The success of urban tourism depends on the level of planning and marketing undertaken by the city. It is equally important to build a good perception of the city and ensure satisfaction in the minds of the visitors. The sustainability of tourism must be accounted to warrant longevity of tourism in the city. Tourism plays a crucial role in the economic development of a city as infrastructure and transportation services have to be developed to cater the needs of tourists. In particular, transportation systems enable the tourists to travel to different locations of a city and maximize the utility from a city. Hence, paramount importance is given to building well-connected transportation infrastructure in cities.

Cities such as London, New York City, Copenhagen and Chicago attract huge number of tourists from all over the world. These cities exhibit extensive transportation systems that enable efficient movement of people to different parts of the city. Each of these cities exemplifies a transportation mode that makes them the best in that category. For instance, Copenhagen is the best in bike infrastructure, London is famous for its Underground transit system, New York City has an extensive suburban rail and bus network, and Chicago has a world famous commuter rail network. All these cities have high levels of ridership in their transit networks and considerable bike and pedestrian paths throughout the city. Atlanta does not attract a huge number of recreational tourists as compared to these cities. One of the many reasons is the relatively poor transportation network in the city. The car-friendly city is characterized by limited mode choices and an inefficient public transit system. The newly built Streetcar system in Downtown Atlanta awaits approval for expansion to improve connectivity. The strategies to improve transportation infrastructure in the City of Atlanta to promote tourism are presented in Table 6.1. The recommended strategies particularly address the shortcomings of Atlanta's transportation infrastructure as determined from Section 5.3. The strategies are categorized based on short-term (2-3 years), medium-term (5 years) and long-term (10 years) implementation plans.

Other strategies to improve tourism in Atlanta include;

i. Promote local-tourist interaction through events/workshops
ii. Set up information kiosks across the city to attract tourist
iii. Employ multi-lingual workers, print brochures in multiple language to improve communication
iv. Mobile applications must be built to improve access to information
v. Safety of visitors must be ensured through better policing
vi. Market Atlanta as a safe and tourist friendly city

Table 6-1 Strategies to improve tourism attractiveness in Atlanta

Short-Term Strategies	Medium-Term Strategies	Long-Term Strategies
• Frequent bus service exclusively connecting the tourist hotspots • Pedestrian only shopping/restaurant corridors promoting street arts • Pedestrian friendly sidewalks must be built throughout the city • Well-lit roads • Provide exclusive space for bikes on MARTA rail and provide markings on the station platform and inside train showing bike only spaces • Sidewalks must be allowed to accommodate bikes until bike lanes are constructed across all major roads • Well marked signs showing directions and distances to tourist attractions • Right of way reserved to pedestrian/bikes in tourist areas • Promote privately operated transit services such as dollar vans and jitneys	• Bike and pedestrian paths/trails connecting the key tourist attractions in the city • Setup bike share services • A complete street approach can be adopted in planning tourist areas of the city • Protected bike lanes to ensure safety and improve ridership • Improve inter-modal connectivity by reducing jurisdictional and political boundaries • Reduce number of transfers by improving connectivity and frequency of services • Improve last mile connectivity options by focusing on better taxi and bike share services • Improve transit connectivity to suburban areas • Employ transportation demand management strategies to reduce traffic congestion during peak hours • Bike boulevards along multiple corridors improving access to locations	• A comprehensive study to evaluate the recreational tourism in the city that identifies key tourist attractors • Increasing the number of travel modes in the city, in particular looking at feasibility of recreational modes such as gondolas, etc. • Focus on making at least one transportation mode in Atlanta as the best in the world • Improve commuter rail services to nearby towns and cities such as Savannah, Athens, Chattanooga, etc. • Study tourist movement patterns so as to build transportation systems that mimic or improve tourist travel patterns • Focus on building high-density neighborhoods so as to improve walkability • The feasibility of free trolley services connecting key tourist areas must be studied

These strategies can help Atlanta attract a huge number of domestic and international visitors, and improve the transportation infrastructure in the city. Some of the strategies can be implemented in a short-term, whereas some strategies require extensive feasibility analysis. Nevertheless, adopting these strategies has the potential to make Atlanta a recreational tourism hotspot in the world.

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